

# Illustrated **Glossary** for Transport Statistics

4th EDITION





## Glossary Introduction

The Glossary for Transport Statistics was published for the first time in 1994 with the purpose of assisting member countries during the collection of data on transport using the Common Questionnaire developed by the UNECE, ITF and Eurostat.

The present fourth edition is the result of continuing valuable cooperation between the three organisations that – through the action of the Intersecretarial Working Group (IWG. Trans) – has put a sustained effort into meeting the need to harmonise transport statistics at the international level. The Glossary now comprises 735 definitions and represents a point of reference for all those involved in transport statistics. By following the guidance contained within these definitions, a considerable contribution will be given to the improvement in both the quality and comparability of the data.

In this fourth edition, the rail, road, inland waterway, pipelines and intermodal chapters have been substantially revised. A new air transport chapter has been added. In rail, the revision takes account of the changing environment facing rail operators, especially in Europe. In addition, a completely new rail accidents section has been added. The road and inland waterway chapters have also benefited from a thorough revision to reflect current concerns. For the inland waterway chapter, an accident section has been added. The pipeline chapter has been extended to cover gas as well as oil pipelines, given their growing importance in supplying the energy market. The new air transport chapter follows the guidance given by ICAO but with some extra input from IATA and ACI.

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### Notice:

*The explanatory notes in italics, given below some of the definitions, are intended to help understanding of them and to assist countries in filling in questionnaires. The notes are not part of the definitions themselves.*

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Numerous national experts and officials of international and non-governmental organisations were consulted on the different chapters. The revisions process was reviewed and approved by the members of the UNECE Working Party on Transport Statistics (WP6) at its meeting in May 2008.

The main work on the revisions was undertaken by a team of experts. The team consisted of:

- Mr Roland Fischer who took the lead on railway transport and assisted with air transport,
- Mr Erik Grib who led on road transport and intermodal,
- Mr Franz Justen, responsible for inland waterways and pipeline transport,
- Mr Lars Sjöberg who assisted on railway transport,
- Mr Richard Butchart who took the lead on air transport and coordinated the technical element of the project and
- Ms Karen Ifrah (Artemis Information Management), responsible for research, co-ordination of the non-technical aspects of the project and the linguistic revision.

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A

## Railway Transport







## A.I INFRASTRUCTURE

### A.I-01

#### **Track**

A pair of rails over which rail borne vehicles can run.

Track gauge: Distance between a pair of rails measured between the inside edges of the rail heads.

The following track gauges are in use:

- Standard gauge: 1.435 m
- Large gauge: 1.520 m (example Commonwealth of Independent States)  
1.524 m (example Finland)  
1.600 m (example Ireland)  
1.668 m (example Spain, Portugal)
- Narrow gauge: 0.60 m, 0.70 m, 0.75 m, 0.76 m, 0.785 m, 0.90 m, 1.00 m.

"Large gauge" is sometimes referred to as "broad gauge".



### A.I-02

#### **Electrified track**

Track provided with an overhead catenary or a conductor rail to permit electric traction.

The following types of electric current are in use:

- AC      25 000 Volts, 50 Hz  
15 000 Volts, 16 2/3 Hz
- DC      3 000 Volts  
1 500 Volts  
750 Volts  
660 Volts  
630 Volts.

### A.I-03

#### **Running track**

A track providing end-to-end line continuity designed for trains between stations or places indicated in tariffs as independent points of departure or arrival for the conveyance of passengers or goods.

### A.I-04

#### **Sidings**

Tracks branching off running tracks.

*The length of sidings is included in the length of tracks if the sidings are managed by the infrastructure manager, private sidings being excluded.*

### A.I-05

#### **Private siding**

Track or set of tracks which are not managed by the infrastructure manager but are linked up with the track of an infrastructure manager so that:

- a) Railway transport operators or supportive functions can perform necessary activities.
- b) Industrial, commercial or port, etc. establishment or group of establishments can be served by rail without transhipment.



## Railway transport

### A.I-06 Line

One or more adjacent running tracks forming a route between two points. Where a section of network comprises two or more lines running alongside one another, there are as many lines as routes to which tracks are allotted exclusively.



### A.I-07 Electrified line

Line with one or more electrified running tracks.

The following types of electric current are in use:

- AC      25 000 Volts, 50 Hz  
              15 000 Volts, 16 2/3 Hz
- DC      3 000 Volts  
              1 500 Volts  
              750 Volts  
              660 Volts  
              630 Volts



*Sections of lines adjacent to stations that are electrified only to permit shunting and not electrified as far as the next stations are to be counted as non-electrified lines.*

### A.I-08 Metro line / subway

An electric rail line mainly for urban transport with the capacity for heavy volumes of traffic involving very frequent train movements. Metro lines are also characterised by closely spaced stations, normally with around 1 000 m between the stations.

*Also known as "subway", "metropolitan railway", "heavy rail", "rapid rail", "rapid transit", "metro" or "underground".*

### A.I-09 Light rail line

A rail line mainly for urban transport of passengers often electrified. Stations/halts are generally less than 1 200 m apart.

*In comparison to metros, light rail is more lightly constructed, is designed for lower traffic volumes and usually travels at lower speeds. Normally the power is drawn from an overhead electric line via a trolley or a pantograph. It is sometimes difficult to make a precise distinction between light rail and trams; trams are generally not separated from road traffic, whereas light rail may be separated from other systems.*



#### A.I-10 Tramline (streetcar)

A railway mainly installed on and well integrated into the urban road system. The trams are powered either electrically or by diesel engine, particularly for special rail borne road vehicles.

*Also known as trolley car.*



#### A.I-11 Railway line

Line of communication made up by rail exclusively for the use of railway vehicles.

*Line of communication is an area equipped for the performance of rail transport.*

#### A.I-12 Main railway line

Main railway lines comprise the high-speed railway lines and important major conventional railway lines as defined by national or international authorities.

*Within the European Community for example guidelines define a specific main rail-network within the trans-European transport network (TEN), which is considered to be important at community level.*

#### A.I-13 Conventional railway line

All railway lines that are not classified as «dedicated high speed lines» or «upgraded high speed railway lines».

#### A.I-14 Dedicated high speed railway line

A line specially built to allow traffic at speeds generally equal to or greater than 250 km/h for the main segments.

*High speed lines may include connecting lines, in particular connecting segments into town centre stations located on them, on which speeds may take account of local conditions.*

#### A.I-15 Upgraded high speed railway line

A conventional line specially upgraded to allow traffic at speeds of the order of 200 km/h for the main segments.

*They include specially upgraded high speed lines which have specific features as a result of topographical, relief or town-planning constraints, on which the speed must be adapted for each case.*

#### A.I-16 Length of lines operated

The total length of line operated for passenger transport, goods transport, or both.

*When a line is operated simultaneously by several railway enterprises it will be counted only once.*

**A.I-17 Railway network**

All railways in a given area.

*This does not include stretches of road or water even if rolling stock is conveyed over such routes, e.g. by wagon-carrying trailers or ferries. Lines solely used for tourism are excluded as are railways constructed solely to serve mines, forests or other industrial or agricultural undertakings and which are not open to public traffic.*

**A.I-18 Railway network segment**

Specific railway line connecting two or more geographical reference points. Each segment has a start and an end, being a track crossing a country border or a railway station.

**A.I-19 Maximum operating speed**

The highest speed allowed on commercial service taking into account technical characteristics of the infrastructure.

**A.I-20 Rail loading gauge**

The profile through which a railway vehicle and its loads must pass, taking into account tunnels and track side obstacles.

*There are 3 international gauges, agreed by UIC:*

- *A GAUGE: Total height 3.85 m above the rail and 1.28 m on either side of the track axle*
- *B GAUGE: Total height 4.08 m above the rail and 1.28 m on either side of the track axle*
- *C GAUGE: Total height 4.65 m above the rail and 1.45 m on either side of the track axle.*

*Another gauge of particular significance is the B+ GAUGE, for which the total height is 4.18 m above the rail and 1.36 m on either side of the track axle.*

*More generally, there are many other gauges recognised by rail networks.*

**A.I-21 Railway station**

A railway establishment which is either open or not to the public, generally staffed and which is designed for one or more of the following operations:

- formation, dispatch, reception and temporary stabling of trains
- stabling and marshalling of rolling stock
- boarding and alighting of passengers
- generally, where open to public, providing facilities for the purchase of tickets
- loading and unloading of goods.

**A.I-22 Joint railway station**

Junction station between railway companies, the operation of which is governed by an agreement between the States or companies concerned.

**A.I-23 Halt**

Stop-off point generally open to passenger traffic only and not usually staffed.

**A.I-24 Marshalling yard**

Station or part of a station especially equipped with a number of tracks or other equipment for railway vehicle marshalling (switching) operations.

*Sometimes referred to as classification yard.*

**A.I-25 Intermodal rail transport terminal**

Place equipped for the transhipment and storage of intermodal transport units (ITUs) between modes, one of which is rail.

*The "Hub and Spoke" concept relates to collection through a central point (the hub) and distribution in various directions (the spokes). The hub is a central point for the collection, sorting, transhipment and distribution of goods for a particular region.*



## A.II TRANSPORT EQUIPMENT

### A.II.A VEHICLES

#### A.II.A-01 Railway vehicle

Mobile equipment running exclusively on rails, moving either under its own power (tractive vehicles) or hauled by another vehicle (coaches, railcar trailers, vans and wagons).

*The following vehicles are included in the statistics for a railway enterprise:*

- All railway vehicles belonging to the railway enterprise and hired by it and actually at its disposal, including those under or waiting for repair, or stored in working or non working-order, and foreign vehicles at the disposal of the enterprise and vehicles of the enterprise temporarily abroad and engaged in the normal course of running
- Private owners' wagons, i.e. those not belonging to the railway enterprise but authorized to be operated by it under specified conditions, together with wagons hired out by the railway enterprise to third parties and being operated as private owners' wagons.
- Statistics for a railway enterprise exclude vehicles not at its disposal, i.e.
  - Foreign vehicles or vehicles not belonging to the railway enterprise circulating on the railway network
  - Vehicles which are on hire to, or otherwise at the disposal of, other railway bodies
  - Vehicles reserved exclusively for service transport condemned or intended for sale or, breaking up.

#### A.II.A-02 High speed railway vehicle

A railway vehicle designed to operate at a speed of at least 250 km/h on dedicated high speed lines.

#### A.II.A-03 Tilting high speed railway vehicle

A railway vehicle with a tilting system designed to have an operating speed of 200 km/h or above on upgraded high speed lines.

#### A.II.A-04 Conventional high speed railway vehicle

Any railway vehicle not specially designed to run on dedicated or upgraded high speed lines but still being able to reach a maximum operating speed of approximately 200 km/h.

#### A.II.A-05 Trainset

Indivisible block of railcar(s) and railcar trailer(s) or locomotive(s) and passenger railway vehicle(s).

*Included are trainsets that are technically divisible but are normally kept in the same configuration. One trainset may be coupled to another one. Each trainset may have more than one tractive vehicle.*





#### A.II.A-06 Tractive vehicle

A vehicle equipped with prime mover and motor, or with motor only, intended either for hauling other vehicles (a "locomotive") or for hauling other vehicles and for the carriage of passengers and/or goods (a "railcar").

#### A.II.A-07 Locomotive

Tractive railway vehicle with a power of 110 kW and above at the draw hook equipped with prime mover and motor or with motor only used for hauling railway vehicles.

*Light rail motor tractors are excluded.*

Types of locomotives

- Electric locomotive

*- Locomotive with one or more electric motors, deriving current primarily from overhead wires or conductor rails or from accumulators carried on the locomotive.*

*A locomotive so equipped which also has an engine (diesel or other) to supply current to the electric motor when it cannot be obtained from an overhead wire or from a conductor rail is classed as an electric locomotive.*

- Diesel locomotive

*- Locomotive, the main source of power of which is a diesel engine, irrespective of the type of transmission installed.*

*However, diesel-electric locomotives equipped to derive power from an overhead wire or from a conductor rail are classed as electric locomotives.*

- Steam locomotive

*- Locomotive, whether cylinder or turbine driven, in which the source of power is steam irrespective of the type of fuel used.*

#### A.II.A-08 Light rail motor tractor

Tractive railway vehicle with a power of less than 110 kW at the draw hook (coupler).

*Normally used for shunting or for work trains and short-distance or low-tonnage terminal services. The definitions of the various categories of locomotives (electric, diesel) apply, mutatis mutandis, to light rail motor tractors.*

#### A.II.A-09 Railcar

Tractive railway vehicle with motor constructed for the conveyance of passengers or goods by rail.

*The definition of the various categories of locomotives (electric, diesel) applies, mutatis mutandis, to railcars.*

*A block composed of railcars and railcar trailers can be referred to as:*

- "Multiple unit" if it is modular
- "Trainset" if it is fixed.

*In tractive vehicle statistics, each railcar in an indivisible set is counted separately; in statistics of passenger vehicles and goods vehicles, each body fitted to carry passengers or goods (tractive and non tractive) is counted as one unit. Independent of drivers' compartments installed or not, any unit with tractive power must be considered as a tractive vehicle. When two railcar units have a common tractive bogie, both units are considered as a tractive vehicle.*





#### A.II.A-10 Passenger railway vehicle

Railway vehicle for the conveyance of passengers, even if it comprises one or more compartments with spaces specially reserved for luggage, parcels, mail, etc.

*These vehicles include special vehicles such as sleeping cars, saloon cars, dining cars, ambulance cars and vans carrying accompanied road passenger vehicles. Each separate vehicle of an indivisible set for the conveyance of passengers is counted as a passenger railway vehicle. Included are railcars if they are designed for passenger transport.*

#### A.II.A-11 Metro vehicle

Electric railway vehicle designed for use on a metroline.

*Usually drawing power from a third rail.*

#### A.II.A-12 Tram (streetcar)

Passenger or freight road vehicle designed for use on a tramline.

#### A.II.A-13 Light rail vehicle

Rail vehicle designed for use on a light rail line.



#### A.II.A-14 Railcar trailer

Non-tractive passenger railway vehicle coupled to one or more railcars.

*Vehicles for the transport of goods, even when pulled by a railcar, are referred to as wagons.*

#### A.II.A-15 Coach

Passenger railway vehicle other than a railcar or a railcar trailer.





#### A.II.A-16 Passenger carrying capacity: seats and berths

The number of seats and/or berths available in a passenger vehicle when performing the service for which it is intended.

*Seats in dining coaches and buffet compartment places are excluded.*

#### A.II.A-17 Passenger carrying capacity: standing places

The number of authorized standing places available in a passenger vehicle when performing the service for which it is intended.

#### A.II.A-18 Van

Non-tractive railway vehicle forming part of a passenger or goods train and used by the train crew as well as for the conveyance of luggage, parcels, bicycles, accompanied road passenger vehicles etc.

*Vehicles possessing one or more passenger compartments are not counted as vans but as passenger railway vehicles. Mail vans are included under vans when they do not have a passenger compartment.*

#### A.II.A-19 Freight wagon or wagon

Railway vehicle normally intended for the transport of goods.



#### A.II.A-20 Railway enterprise-owned wagon

Any wagon belonging to a railway enterprise.

*Excluded are privately-owned wagons.*

#### A.II.A-21 Privately-owned wagon

Wagon not belonging to a railway enterprise, but at its disposal and authorized to run for it under specified conditions, or wagon hired out by a railway enterprise to third parties.

#### A.II.A-22 Covered wagon

Wagon characterized by its closed construction with a roof and fully enclosed sides, capable of being locked and/or sealed.

*Wagons with an opening roof as well as those insulated, heated and refrigerated are included.*

**A.II.A-23 Insulated wagon**

Covered wagon the body of which is built with insulating walls, doors, floor and roof, to limit heat exchange between the interior of the wagon and the outside so that the overall coefficient of heat transfer (K coefficient), allows the equipment to be assigned to one or other of the following two categories:

- IN = Normally insulated: characterized by a K coefficient equal to or less than 0.7 W/m 2°C
- IR = Heavily insulated: characterized by a K coefficient equal to or less than 0.4 W/m 2°C.

**A.II.A-24 Refrigerated wagon (Reefer)**

Insulated wagon using a source of cooling. Such sources include:

- Natural ice, with or without the addition of salt
- Eutectic plates; dry ice, with or without sublimation control
- Liquefied gases, with or without evaporation control, other than a mechanical or "absorption" unit.

*Such a wagon is capable, with a mean outside temperature of + 30°C, of lowering the temperature inside the empty body to, and thereafter maintaining it, with the aid of appropriate refrigerants and fittings:*

- At + 7°C maximum in the case of class A
- At -10°C maximum in the case of class B
- At -20°C maximum in the case of class C
- At 0°C maximum in the case of class D.

**A.II.A-25 Mechanically refrigerated wagon**

Insulated wagon either fitted with its own refrigerating device, or serviced jointly with other such units by an external refrigerating system. Such refrigerating devices include:

- Mechanical compressors
- "Absorption" units.

*A mechanically refrigerated wagon should be capable, with a mean outside temperature of + 30°C, of lowering the temperature inside the empty body to, and thereafter maintaining it continuously at levels in conformity with the standards defined below:*

- Class A. The internal wagon temperature should be maintained between +12°C and 0°C inclusive
- Class B. The internal wagon temperature should be maintained between +12°C and -10°C inclusive
- Class C. The internal wagon temperature should be maintained between +12°C and -20°C inclusive.

**A.II.A-26 Heated wagon**

Insulated wagon fitted with a heater.

- Class A. Heated equipment for use when the mean outside temperature is - 10°C
- Class B. Heated equipment for use when the mean outside temperature is - 20°C.

**A.II.A-27 High sided wagon**

Wagon with no roof and with rigid sides higher than 60 cm.

**A.II.A-28 Flat wagon**

Wagon without roof or sides, or wagon without roof but with sides not higher than 60 cm, or swing-bolster wagon, of ordinary or special type.

**A.II.A-29 Tank wagon**

Wagon designed for the bulk transport of liquids or gases.

**A.II.A-30 Silo wagon**

Wagons for the transport in bulk of powdered products such as cement, flour, plaster, etc.

**A.II.A-31 Wagon for intermodal transport (see G.II-10)**

Wagon specially built or equipped for the transport of intermodal transport units (ITUs) or other goods road vehicles.

*Types of wagons are:*

- *Pocket wagon: Rail wagon with a recessed pocket to accept the axle/wheel assembly of a semi-trailer*
- *Basket wagon: Rail wagon with a demountable sub frame, fitted with devices for vertical handling to allow the loading and unloading of semi-trailers or road motor vehicles*
- *Spine wagon: Rail wagon with a central chassis designed to carry a semi-trailer*
- *Low floor wagon: Rail wagon with a low loading platform built to carry, inter alia ITUs*
- *Rolling-Road wagon: Rail wagon with low floor throughout which, when coupled together, form a rolling-road*
- *Double stack wagon: Rail wagon designed for the transport of containers stacked on top of each other*
- *Bimodal semi-trailer: A road semi-trailer that can be converted into a rail wagon by the addition of rail bogies.*

**A.II.A-32 Wagon carrying capacity**

The carrying capacity of wagon is the maximum authorized weight it can carry.

**A.II.A-33 Age of railway vehicle**

Years since first registration of a railway vehicle, irrespective of the country of registration.

**A.II.B CONTAINERS****A.II.B-01 Loading unit**

Container, swap body.

"Flats" (see A.II.B-09 below) used in maritime transport are included as a special type of container.

**A.II.B-02 Intermodal transport unit (ITU)**

Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

**A.II.B-03 Container**

Special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers.

A more formal technical definition of a container is:

"Article of transport equipment which is:

- a) Of a permanent character and accordingly strong enough to be suitable for repeated use
- b) Specially designed to facilitate the carriage of goods, by one or more mode of transport, without intermediate reloading
- c) Fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another
- d) So designed as to be easy to fill and empty
- e) Stackable and
- f) Having an internal volume of 1 m<sup>3</sup> or more."

Swap bodies are excluded.

Although without internal volume, and therefore not satisfying criterion (f) above, flats (see A.II.B-09 below) used in maritime transport should be considered to be a special type of container and therefore are included here.

**A.II.B-04 Sizes of containers**

The main sizes of containers are:

- a) 20 Foot ISO container (length of 20 feet and width of 8 feet)
- b) 40 Foot ISO container (length of 40 feet and width of 8 feet)
- c) ISO container over 20 feet and under 40 feet of length
- d) ISO container over 40 foot long;
- e) Super high cube container (oversize container)
- f) Air container (container conforming to standards laid down for air transportation).

Containers are normally 8 foot height but other heights also exist. "High cube containers" are containers with a height of 9.5 foot. "Super high cube containers" are containers exceeding the ISO dimensions. They include container lengths of 45 foot, 48 foot and 53 foot. Containers sizes classified under a) to c) are referred to as large containers.



#### A.II.B-05 Tare weight of container

The tare weight of a container is included in the total weight of the containerised goods transported, also called the gross-gross weight of goods. The gross weight of containerised goods transported can be calculated from the gross-gross weight by deducting the tare weight of the container and vice versa. If information about the tare weight is not available then the tare weight may be estimated using the averages below.

*The tare weight of a container may be estimated as:*

20 Foot ISO container	2.3 tonnes
40 Foot ISO container	3.7 tonnes
ISO container over 20 feet and under 40 feet of length	3.0 tonnes
ISO container over 40 feet of length	4.7 tonnes.

#### A.II.B-06 Types of containers

The main types of containers, as defined by ISO Standards Handbook on Freight Containers are:

1. General purpose containers
2. Specific purpose containers
  - Closed ventilated container
  - Open top container
  - Platform based container open sided
  - Platform based container open sided with complete superstructure
  - Platform based container open sided with incomplete superstructure and fixed ends
  - Platform based container open sided with incomplete superstructure and folding ends
  - Platform (container)
3. Specific cargo containers
  - Thermal container
  - Insulated container
  - Refrigerated container (expendable refrigerant)
  - Mechanically refrigerated container
  - Heated container
  - Refrigerated and heated container
  - Tank container
  - Dry bulk container
  - Named cargo container (such as automobile, livestock and others) and
  - Air mode container.

**A.II.B-07 TEU (Twenty-foot Equivalent Unit)**

A statistical unit based on an ISO container of 20 foot length (6.10 m) to provide a standardised measure of containers of various capacities and for describing the capacity of container ships or terminals. One 20 Foot ISO container equals 1 TEU.

- One 40 Foot ISO container equals 2 TEU
- One container with a length over 20 and under 40 foot equals 1.50 TEU
- One container with a length of more than 40 foot equals 2.25 TEU.

**A.II.B-08 Swap body**

A freight-carrying unit optimised to road vehicle dimensions and fitted with handling devices for transfer between modes, usually road/rail.

*Such units were not originally designed to be stacked when full or top-lifted. Many units now can be, although not to the same extent as containers. The main feature distinguishing them from containers is that they are optimised to road vehicle dimensions. Such unit would need UIC approval to be used on rail. Some swap bodies are equipped with folding legs on which the unit stands when not on the vehicle.*

**A.II.B-09 Flat**

A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings.

*This is an alternative term used for certain types of specific purpose containers - namely platform containers and platform-based containers with incomplete superstructures.*

**A.II.B-10 Pallet**

Raised platform, intended to facilitate the lifting and stacking of goods.

*Pallets are usually made of wood, and of standard dimensions:*

*1 000 mm x 1 200 mm (ISO) and 800mm x 1 200 mm (CEN).*

**A.II.B-11 Roll cage, roll container, roll pallet**

Small, un-stackable, normally boxy unit on wheels intended to facilitate the loading and unloading of goods.

**A.II.B-12 Ro-Ro unit**

Wheeled equipment for carrying goods, such as a lorry, trailer or semi-trailer, which can be driven or towed onto a vessel or train.



## A.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT

### A.III-01 Railway enterprise

Any private or public enterprise acting mainly as a railway transport operator, an infrastructure manager or as an integrated company.

*An enterprise whose main business is not related to railways should be included if it has a railway market share that is not marginal. Only the activities related to railways should be reported.*

### A.III-02 Railway transport operator

Any public or private transport operator which provides services for the transport of goods and/or passengers by rail.

*Included are all transport operators that dispose of/provide traction. Excluded are railway transport operators which operate entirely or mainly within industrial and similar installations, including harbours, and railways transport operators which mainly provide local tourist services, such as preserved historical steam railways. Sometimes the term "railway undertaking" is used.*

### A.III-03 Infrastructure manager

Any enterprise or transport operator responsible in particular for establishing and maintaining railway infrastructure, as well as for operating the control and safety systems.

*An infrastructure manager can delegate to another railway enterprise the following tasks: maintaining railway infrastructure and operating the control and safety system.*

### A.III-04 Integrated company

Railway transport operator also being an infrastructure manager.

### A.III-05 Employment

Average number of persons working during a given period in a railway enterprise, as well as persons working outside the enterprise but who belong to it and are directly paid by it.

*Statistics should include all full-time equivalent employees performing all principal and ancillary activities of the railway (operation, renewal, new construction, road and shipping services, electricity generation, hotels and restaurants, etc.).*

### A.III-06 Types of employment

The main categories of employment being considered are:

- General administration including central and regional management staff (e.g. finance, legal, personnel etc.) and boards of directors

*The management staff of specialist departments (operations and traffic, traction and rolling stock, ways and works) are excluded but are taken into account in the statistics specific to each of these services.*

- Operations and traffic

*Station staff (excluding staff operating control and safety systems), train crews (excluding tractive units' crews) and associated central and regional offices. Includes tourism and advertising.*

- Traction and rolling stock

*Tractive units' crews, workshop, inspection staff and associated central and regional offices.*

*Permanent way development and maintenance*



- Permanent way maintenance and supervision staff (including staff operating control and safety systems)
- Other operations.

*Passenger and goods road services, shipping services, electric power plants, hotel staff etc.*

**A.III-07 Turnover**

Total amount invoiced by a railway enterprise during the period under review. This corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the unit vis-à-vis its customers. It also includes all other charges to the customers. Reduction in prices, rebates and discounts as well as the value of returned packing must be deducted, but not cash discounts.

*Turnover does not include sales of fixed assets. Operation subsidies received from public authorities are also excluded.*

**A.III-08 Investment expenditure on infrastructure**

Expenditure on new construction and extension of existing infrastructure, including reconstruction, renewal and major repairs of infrastructure.

*Infrastructure includes land, permanent way constructions, buildings, bridges and tunnels, as well as immovable fixtures, fittings and installations connected with them (signalisation, telecommunications, catenaries, electricity sub-stations, etc.) as opposed to rolling stock.*

**A.III-09 Investment expenditure on rolling stock**

Expenditure for purchase of new railway vehicles.

**A.III-10 Maintenance expenditure on infrastructure**

Expenditure for keeping infrastructure in working order.

**A.III-11 Maintenance expenditure on rolling stock**

Expenditure for keeping railway vehicles in working order.



## A.IV TRAFFIC

### A.IV-01 Railway traffic

Any movement of a railway vehicle on lines operated.

*When a railway vehicle is being carried on another vehicle only the movement of the carrying vehicle (active mode) is considered.*

### A.IV-02 Railway traffic on national territory

Any movement of railway vehicles within a national territory irrespective of the country in which these vehicles are registered.

### A.IV-03 Shunting

Operation of moving a rail vehicle or set of rail vehicles inside a railway station or other railway installations (depot, workshop, marshalling yard, etc.).

### A.IV-04 Railway vehicle journey

Any movement of a railway vehicle from a specified point of origin to a specified point of destination.

*A journey can be divided into a number of sections or stages.*

### A.IV-05 Train

One or more railway vehicles hauled by one or more locomotives or railcars, or one railcar travelling alone, running under a given number or specific designation from an initial fixed point to a terminal fixed point.

A light engine, i.e. a locomotive travelling on its own, is not considered to be a train.

### A.IV-06 Types of train

The main categories being considered are:

- Goods train: Train for the carriage of goods composed of one or more wagons and, possibly, vans moving either empty or under load
- Passenger train: Train for the carriage of passengers composed of one or more passenger railway vehicles and, possibly, vans moving either empty or under load
- Mixed train: Train composed of passenger railway vehicles and of wagons
- Other trains: Trains moving solely for the requirements of the railway enterprise, which involve no payments to third parties.

### A.IV-07 Train-kilometre

Unit of measurement representing the movement of a train over one kilometre.

*The distance to be considered is the distance actually travelled.*

### A.IV-08 Tractive vehicle-kilometre

Unit of measurement representing any movement of an active tractive vehicle over a distance of one kilometre.

*Tractive vehicles running light (without hauling a load) are included. Shunting movements are excluded*

**A.IV-09 Hauled vehicle-kilometre**

Unit of measurement representing any movement of a hauled vehicle over one kilometre.

*Railcars movements are included. Shunting movements are excluded.*

**A.IV-10 Tonne-kilometre offered**

Unit of measurement representing the movement of one tonne of capacity available in a wagon when performing services for which it is primarily intended over one kilometre.

*The distance to be considered is that actually travelled. Shunting and other similar movements are excluded.*

**A.IV-11 Wagon-kilometre**

Unit of measurement representing any movement of a wagon loaded or empty over a distance of one kilometre.

*The distance to be considered is that actually travelled (each country counts the km performed on its territory). Shunting and other similar movements are excluded. All wagon journeys are included irrespective of the ownership of the wagon.*

**A.IV-12 Seat-kilometre offered**

Unit of measurement representing the movement of one seat available in a passenger railway vehicle when performing the services for which it is primarily intended over one kilometre.

*The distance to be considered is that actually travelled. Shunting and other similar movements are excluded.*

**A.IV-13 Gross-gross tonne-kilometre hauled**

Unit of measurement representing the movement over a distance of one kilometre of one tonne of railway vehicle where the weight of tractive vehicle is included.

*Included are the weights of: tractive unit, hauled railway vehicle and its load. Passengers and their luggage are excluded. Shunting and other similar movements are excluded.*

**A.IV-14 Gross tonne-kilometre hauled**

Unit of measurement representing the movement over a distance of one kilometre of one tonne of hauled vehicles (and railcars) and contents.

*The weight of railcars is included, whereas the weight of locomotives is excluded. Passengers and their luggage are excluded. Shunting and other similar movements are excluded.*



## A.V TRANSPORT MEASUREMENT

### A.V-01 Railway transport

Any movement of goods and/or passengers using a railway vehicle on a given railway network.

*When a railway vehicle is being carried on another rail vehicle only the movement of the carrying vehicle (active mode) is being considered.*

### A.V-02 Types of railway transport

The main categories are:

- Revenue earning railway transport: Transport conveyed for an outside party against payment
- Service railway transport: Transport which the railway enterprise performs in order to meet its internal requirements whether or not such transport is revenue earning.

### A.V-03 National railway transport

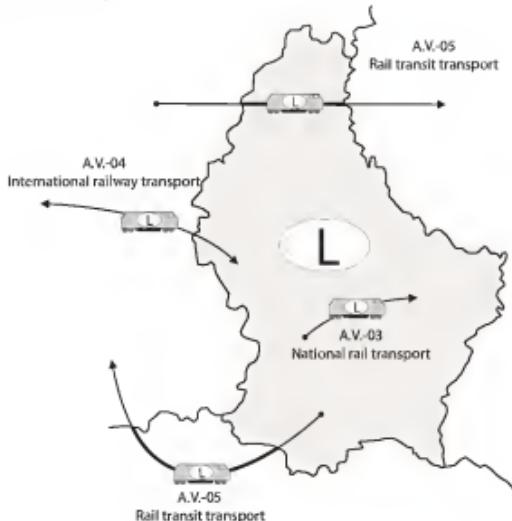
Railway transport between two places (a place of loading/embarkation and a place of unloading/disembarkation) located in the same country.

*It may involve transit through a second country.*

### A.V-04 International railway transport

Railway transport between a place (of loading/embarkation or of unloading/disembarkation) in one country and a place (of loading/embarkation or of unloading/disembarkation) in another country.

*It may involve transit through one or more additional countries. To avoid double counting, each country only counts the pkm or tkm performed on its territory. The number of passengers or the weight of the freight transported is counted in each country.*



**A.V-05 Rail transit**

Railway transport through a country between two places (a place of loading/embarkation and a place of unloading/disembarkation) outside that country.

Operations involving 'Change of Gauge' between two different track gauges in a country are considered as transit and not as unloading and loading.

*Transport operations involving loading/embarkation or unloading/disembarkation of a railway vehicle at the frontier of that country from/onto another mode of transport, for example transition between Railway-transport and Maritime-transport in ports, are not considered as transit.*

**A.V-06 Rail passenger**

Any person, excluding members of the train crew, who makes a journey by rail.

*Passengers making a journey solely by railway operated ferry or bus services are excluded.*

**A.V-07 Revenue rail passenger**

A passenger for whose transportation a rail enterprise receives commercial remuneration.

**A.V-08 Rail passenger-kilometre (pkm)**

Unit of measurement representing the transport of one rail passenger by rail over a distance of one kilometre.

*The distance to be taken into consideration should be the distance actually travelled by the passenger on the network. To avoid double counting each country should count only the pkm performed on its territory. If this is not available, then the distance charged or estimated should be used.*

**A.V-09 Rail passenger embarked**

Passenger who boards a railway vehicle to be conveyed by it.

*A passenger transfer from one railway vehicle directly to another one, regardless of the railway transport operator, is not regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a railway vehicle followed by a subsequent embarkation on a railway vehicle.*

**A.V-10 Rail passenger disembarked**

A passenger alighting from a railway vehicle after having been conveyed by it.

*A passenger transfer from one railway vehicle directly to another one, regardless of the railway transport operator, is not regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a railway vehicle followed by a subsequent embarkation on a railway vehicle.*

**A.V-11 Rail passenger journey**

The combination between the place of embarkation and the place of disembarkation of the passengers conveyed by rail whichever itinerary is followed on the railway network.

**A.V-12 Place of embarkation**

The place in which a railway passenger boards the railway vehicle to be conveyed by it.

*A passenger transfer from one railway vehicle directly to another one, regardless of the railway transport operator, is not regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a railway vehicle followed by a subsequent embarkation on a railway vehicle.*

**A.V-13 Place of disembarkation**

The place in which a railway passenger leaves the railway vehicle after being conveyed by it.

*A passenger transfer from one railway vehicle directly to another one, regardless of the railway transport operator, is not regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a railway vehicle followed by a subsequent embarkation on a railway vehicle.*

**A.V-14 Consignment**

Collection of goods transported under cover of the same transport document in accordance with regulations or tariffs in force where they exist.

**A.V-15 Types of consignment**

The main categories are:

- Full train load: Any consignment comprising a train with one or several wagon loads transported together for one consignor with no change in train composition from a single point of loading to a single point of unloading
- Full wagon load: Any consignment of goods requiring the exclusive use of a wagon through out its journey whether the full wagon loading capacity is utilized or not; wagons in a full train load are excluded
- Smalls / small load: Any consignment other than full train loads or full wagon loads.

**A.V-16 Goods carried by rail**

Any goods moved by rail vehicles.

*This includes all packaging and equipment, such as containers, swap-bodies or pallets as well as road goods vehicles carried by rail.*

**A.V-17 Gross-gross weight of goods**

The total weight of the goods carried, all packaging and the tare weight of the transport unit (e.g. containers, swap bodies and pallets for containing goods as well as road goods vehicles carrying goods and transported by rail).

*This is the weight to be used in the compilation of rail transport statistics.*

**A.V-18 Gross weight of goods**

The total weight of goods carried, including packaging but excluding the tare weight of the transport unit (e.g. containers, swap bodies and pallets for containing goods as well as road goods vehicles carrying goods).

**A.V-19 Tare weight**

The weight of a transport unit (e.g. containers, swap-bodies and pallets for containing goods as well as road goods vehicles carrying goods and transported by rail) before any cargo is loaded.

**A.V-20 Tonne-kilometre (tkm)**

Unit of measurement of goods transport which represents the transport of one tonne of goods over a distance of one kilometre.

*The distance to be covered is the distance actually travelled on the considered network. To avoid double counting each country should count only the tkm performed on its territory. If it is not available, then the distance charged or estimated should be taken into account.*

**A.V-21 Categories of goods carried by rail**

Goods in transport may be classified according to type.

*Examples of classification schemes are NST 2007 (Standard Goods Nomenclature for Transport Statistics) that replaces the CSTE nomenclature (Commodity Classification for Transport Statistics in Europe - UNECE) and the NST/R nomenclature (Standard Goods Nomenclature for Transport Statistics/revised - Eurostat).*

**A.V-22 Types of cargo carried**

Goods in transport may be classified according to the UNECE – Codes for types of cargo, packages and packaging materials, Recommendation 21, Geneva March 1986. The cargo classes are:

- Liquid bulk
- Solid bulk
- Large freight container
- Other freight container
- Palletised goods
- Pre-slung goods
- Mobile, self-propelled units
- Other mobile units
- Other cargo types.

**A.V-23 TEU-kilometre**

Unit of measurement representing the movement of one TEU over one kilometre

**A.V-24 Dangerous goods**

The classes of dangerous goods carried by rail are those defined by the fifteenth revised edition of the UN Recommendations on the Transport of Dangerous Goods, United Nations, Geneva 2007.

- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable liquids
- Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases
- Class 5: Oxidizing substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive material
- Class 8: Corrosive substances
- Class 9: Miscellaneous dangerous substances and articles.

**A.V-25 Goods loaded**

Goods placed on a railway vehicle and dispatched by rail.

*Unlike in road and inland waterway transport, transhipments from one railway vehicle directly to another and change of tractive vehicle are not regarded as unloading/loading. However, if the goods are unloaded from a railway vehicle, loaded on another mode of transport and, again loaded on another railway vehicle, this is considered as unloading from the first railway vehicle followed by loading on the second railway vehicle.*

**A.V-26 Goods unloaded**

Goods taken off a railway vehicle after transport by rail.

*Unlike in road and inland waterway transport, transhipments from one railway vehicle directly to another and change of tractive vehicle are not regarded as unloading/loading. However, if the goods are unloaded from a railway vehicle, loaded on another mode of transport and, again loaded on another railway vehicle, this is considered as unloading from the first railway vehicle followed by loading on the second railway vehicle.*

**A.V-27 International goods transport by rail - loaded (outgoing)**

Goods carried by rail between a place of loading located in the reporting country and a place of unloading in another country.

*Goods in transit throughout are not included. Wagons loaded on a railway network and carried by ferry to a foreign network are included.*

**A.V-28 International goods transport by rail - unloaded (incoming)**

Goods carried by rail between a place of loading located in a foreign country and a place of unloading in the reporting country.

*Goods in transit throughout are not included. Wagons loaded on a foreign railway network and carried by ferry to the reporting network are included.*

**A.V-29 Goods in transit by rail throughout**

Goods carried by rail through the reporting country between two places (place of loading/unloading) outside the reporting country.

*Wagons entering and/or leaving the reporting network by ferry are included.*

**A.V-30 Goods rail transport link**

The combination of the place of loading and the place of unloading of the goods transported by rail whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics - Eurostat).*

**A.V-31 Place of loading**

The place taken into account is the place in which the goods are loaded on a railway vehicle to be transported by it.

*Unlike in road and inland waterway transport, transhipments from one railway vehicle directly to another and change of tractive vehicle are not regarded as unloading/loading. However, if the goods are unloaded from a railway vehicle, loaded on another mode of transport and, again loaded on another railway vehicle, this is considered as unloading from the first railway vehicle followed by loading on the second railway vehicle.*

**A.V-32 Place of unloading**

The place taken into account is the place in which the goods are unloaded from a railway vehicle after being transported by it.

*Unlike in road and inland waterway transport, transhipments from one railway vehicle directly to another and change of tractive vehicle are not regarded as unloading/loading. However, if the goods are unloaded from a railway vehicle, loaded on another mode of transport and, again loaded on another railway vehicle, this is considered as unloading from the first railway vehicle followed by loading on the second railway vehicle.*



## A.VI ENERGY CONSUMPTION

### A.VI-01 Energy consumption by rail transport

Final energy consumed by tractive vehicles for traction, train services and facilities (heating, air conditioning, lighting etc.).

### A.VI-02 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption: 1 TOE = 0.041868 TJ.

Conversion factors adopted by the International Energy Agency (IEA) for 1991 are the following:

- Motor gasoline	1.070
- Gas/diesel oil	1.035
- Heavy fuel oil	0.960
- Liquefied petroleum gas	1.130
- Natural gas	0.917.

The conversion factor used by the IEA for electricity is: 1 TWh = 0.086 Mtoe.

### A.VI-03 Joule

Unit of measurement of energy consumption:

- 1 terajoule =  $10^{12}$  J =  $2.78 \times 10^5$  kWh
- 1 terajoule = 23.88459 TOE.

### A.VI-04 Motor gasoline (petrol)

Light hydrocarbon oil for use in internal combustion engines, excluding those in aircraft.

*Motor gasoline is distilled between 35°C and 215°C and is used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL (Tetraethyl lead) and TML (Tetramethyl lead).*

Calorific value: 44.8 TJ/1 000 L

### A.VI-05 Gas/diesel oil (distillate fuel oil)

Oil obtained from the lowest fraction from atmospheric distillation of crude oil.

*Gas/diesel oil includes heavy gas oils obtained by vacuum re-distillation of the residual from atmospheric distillation. Gas/diesel oil distils between 200°C and 380°C, with less than 65 per cent in volume at 250°C, including losses, and 80 per cent or more at 350°C. The flashpoint is always above 50°C and their density is higher than 0.81. Heavy oils obtained by blending are grouped together with gas oils, provided that their kinematic viscosity does not exceed 25 cSt at 40°C.*

Calorific value: 43.3 TJ/1 000 L

### A.VI-06 Heavy fuel oil (residual)

Heavy oil that makes up the distillation residue.

*This comprises all residual fuel oils (including those obtained by blending). The viscosity of heavy fuel oil is above 25 cSt at 40°C. The flashpoint is always above 50°C and their density is higher than 0.90.*

**A.VI-07 Liquefied petroleum gases (LPG)**

Light hydrocarbons of the paraffin series which are derived solely from the distillation of crude oil.

*The LPG comprises propane and butane or a mixture of these two hydrocarbons. They can be liquefied under low pressure (5–10 atmospheres). In the liquid state and at a temperature of 38°C they have a relative vapour pressure less than or equal to 24.5 bars. Their specific gravity ranges from 0.50 to 0.58.*

**A.VI-08 Hard coal**

A black, natural fossil organic sediment with a gross calorific value of more than 23 860 kJ/kg (5 700 kcal/kg) in the ash-free condition and with the moisture content obtaining at a temperature of 30°C and relative air humidity of 96 per cent, and with a mean random reflectance of vitrinite of at least 0.6.

**A.VI-09 Brown coal - Lignite**

A non-agglomerating coal with a gross calorific value of less than 23 860 kJ/kg (5 700 kcal/kg) in a condition free of wet ash and containing more than 31 per cent volatile matter on a dry mineral free basis.

**A.VI-10 Electric power**

Energy produced by hydro-electric, geothermal, nuclear and conventional thermal power stations, as well as renewal sources etc. excluding energy produced by pumping stations, measured by the calorific value of electricity (3.6 TJ/GWh).



## A.VII ACCIDENTS

### A.VII-01 Accident

Unwanted or unintended sudden event or a specific chain of such events which have harmful consequences.

Railway accidents are accidents in which at least one moving rail vehicle is involved.

They are divided into the following categories:

- Collisions
- Derailments
- Level crossing accidents
- Accidents to persons caused by rolling stock in motion
- Fires in rolling stock
- Others.

*By definition suicides are excluded as they are a deliberate act.*

*For this reason neither the UIC in its rail accident statistics nor the international road accident statistics take them into account. Because of their importance for rail safety and operations, suicide statistics should be collected separately. Terrorist acts are excluded.*

### A.VII-02 Suicide

Act to deliberately injure oneself resulting in death, as recorded and classified by the competent national authority.

### A.VII-03 Attempted suicide

Act to deliberately injure oneself resulting in serious injury, but not in death, as recorded and classified by the competent national authority.

### A.VII-04 Significant accident

Any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, track, other installations or environment, or extensive disruptions to traffic. Accidents in workshops, warehouses and depots are excluded.

*This definition is used by the UIC.*

### A.VII-05 Significant damage to stock, track, other installations or environment

Damage that exceeds an internationally agreed threshold.

*The threshold for significant damage, adopted by the UIC (Union Internationale des Chemins de Fer), was set at €150,000 in 2007.*

### A.VII-06 Extensive disruptions to traffic

Extensive disruption to traffic occurs when train services on at least one main railway line are suspended for more than six hours.

**A.VII-07 Injury accident**

Any accident involving at least one rail vehicle in motion, resulting in at least one killed or injured person. Accidents in workshops, warehouses and depots are excluded.

*This definition includes accidents with slightly injured persons and is similar to that used in road accident statistics.*

**A.VII-08 Serious injury accident**

Any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person. Accidents in workshops, warehouses and depots are excluded.

*This definition is normally used by the UIC for railway accidents and excludes the accidents with slightly injured persons. Figures collected under this definition cannot be compared directly to the number of road accidents which includes accidents with slightly injured persons.*

**A.VII-09 Person killed (Fatality)**

Any person killed immediately or dying within 30 days as a result of an accident.

*It includes passengers, employees and other specified or unspecified persons involved in a rail injury accident.*

**A.VII-10 Person injured****Person seriously injured**

Any person injured who was hospitalised for more than 24 hours as a result of an accident.

**Person slightly injured**

Any person injured excluding persons killed or seriously injured.

*Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.*

**A.VII-11 Collisions (collision of trains), including collisions with obstacles within the clearance gauge**

Front to front or front to end impacts between two trains or a (side) impact between one train and part of another train not clear of the loading gauge, or a train impacting with:

- a) Shunting movements
- b) Fixed objects such as buffer stops or
- c) Objects temporarily present at or near the track (except at level crossings), such as rocks, landslides, trees, lost parts of railway vehicles, road vehicles and machines or equipment for track maintenance.

**A.VII-12 Derailment**

Any case in which at least one wheel of a train leaves the rails.

*Derailments as a result of collisions are excluded. These are classified as collisions.*

**A.VII-13 Level crossing accidents**

Any accident at level crossings involving at least one railway vehicle and one or more crossing vehicles, other users of the road such as pedestrians or other objects temporarily present at or near the track.

- **Level crossing:** Any level intersection between a road and a railway, as authorized by the infrastructure manager and open to public or private road users. Passages between platforms within stations are excluded.
- **Road:** For the purpose of Rail Accidents Statistics, any public or private road, street or highway, including footpaths and bicycle lane.

**A.VII-14 Accidents to persons caused by rolling stock in motion**

Accidents to one or more persons that are either hit by a railway vehicle or part of it or hit by an object attached to or that has become detached from the vehicle. Persons that fall from railway vehicles are included, as well as persons that fall or are hit by loose objects when travelling on-board vehicles.

**A.VII-15 Fires in rolling stock**

Fires and explosions that occur in railway vehicles (including their load) when they are running between the departure station and the destination, including when stopped at the departure station, the destination station or intermediate stops, as well as during re-marshalling operations.

**A.VII-16 Category of person in railway accident statistics**

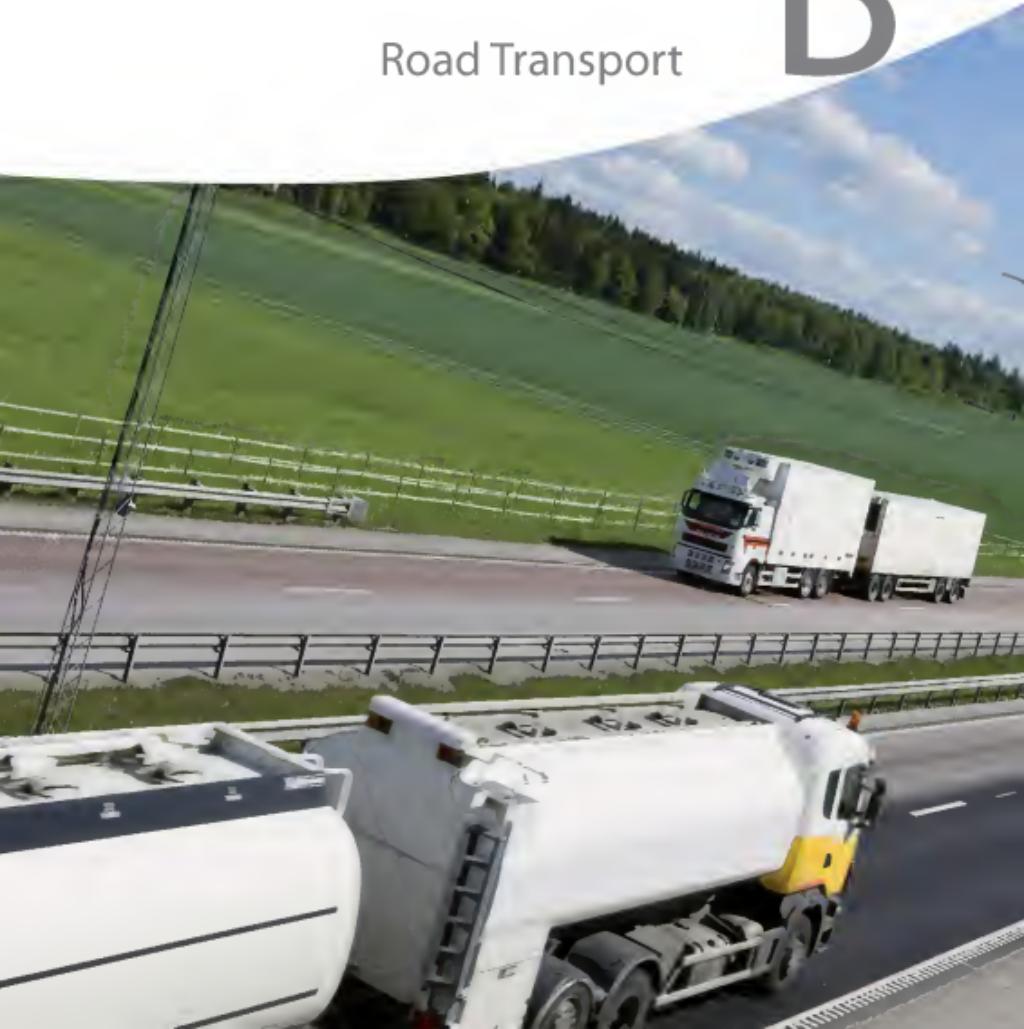
- **Rail passenger:** Any person, excluding members of the train crew, who makes a trip by rail. For accident statistics, passengers trying to embark/disembark onto/from a moving train are included.
- **Employees (staff of contractors and self-employed contractors are included):** Any person whose employment is in connection with a railway and is at work on duty at the time of the accident. It includes the crew of the train and persons handling rolling stock and infrastructure installations
- **Level crossing users:** Persons using a level crossing to cross the railway line by any mean of transportation or by foot
- **Unauthorized persons on railway premises:** Any persons present in railway premises where such presence is forbidden, with the exception of level crossing users.

**A.VII-17 Accident involving the transport of dangerous goods**

Any accident or incident that is subject to reporting in accordance with RID/ADR section 1.8.5.

# B

## Road Transport





## B.I INFRASTRUCTURE

### B.I-01 Road

Line of communication (travelled way) open to public traffic, primarily for the use of road motor vehicles, using a stabilized base other than rails or air strips.

*Included are paved roads and other roads with a stabilized base, e.g. gravel roads. Roads also cover streets, bridges, tunnels, supporting structures, junctions, crossings and interchanges. Toll roads are also included. Excluded are dedicated cycle lanes.*

### B.I-02 Paved road

Road surfaced with crushed stone (macadam) with hydrocarbon binder or bituminized agents, with concrete or with cobblestone.



### B.I-03 Unpaved road

Road with a stabilized base not surfaced with crushed stone, hydrocarbon binder or bituminized agents, concrete or cobblestone.



### B.I-04 Road network

All roads in a given area.

The road network may be classified according to the surface, e.g.

- Paved roads
- Unpaved roads.



**B.I-05 Category of road**

Roads are categorised according to three internationally comparable types:

- a) Motorway
- b) Road inside a built-up area
- c) Other road (outside built-up area).

**B.I-06 Motorway / freeway**

Road, specially designed and built for motor traffic, which does not serve properties bordering on it, and which:

- a) Is provided, except at special points or temporarily, with separate carriageways for traffic in two directions, separated from each other, either by a dividing strip not intended for traffic, or exceptionally by other means
- b) Has no crossings at the same level with any road, railway or tramway track, or footpath
- c) Is especially sign-posted as a motorway and is reserved for specific categories of road motor vehicles.



*Entry and exit lanes of motorways are included irrespective of the location of the sign-posts.*

*Urban motorways are also included.*

**B.I-07 Express road**

Road specially built for motor traffic, which does not serve adjacent properties, and:

- a) Does not normally have separation of carriageways for the two directions of traffic
- b) Is accessible only from interchanges or controlled junctions
- c) Is specially sign-posted as an express road and reserved for specific categories of road motor vehicles
- d) On which stopping and parking on the running carriageway are prohibited.

*Entry and exit lanes are included irrespective of the location of the sign-posts. Urban express roads are also included.*

**B.I-08 Road inside a built-up area: urban road**

Road within the boundaries of a built-up area, with entries and exits sign-posted as such.

*Roads inside a built-up area often have a maximum speed limit of around 50 km/h.*

*Excluded are motorways, express roads and other roads of higher speed traversing the built-up area, if not sign-posted as built-up roads. Streets are included.*

**B.I-09 Road outside a built-up area**

Road outside the boundaries of a built-up area, which is an area with entries and exits sign-posted as such.

**B.I-10****E road**

The international "E" network consists of a system of reference roads as laid down in the European Agreement on Main International Arteries, Geneva, 15 November 1975 and its amendments.

*Reference roads and intermediate roads (Class-A roads) have two-digit numbers; branch, link and connecting roads (Class-B roads) have three-digit numbers.*

**B.I-11****Carriageway**

Part of the road intended for the movement of road motor vehicles; the parts of the road which form a shoulder for the lower or upper layers of the road surface are not part of the roadway, nor are those parts of the road intended for the circulation of road vehicles which are not self-propelled or for the parking of vehicles even if, in case of danger, they may occasionally be used for the passage of motor vehicles. The width of a carriageway is measured perpendicularly to the axis of the road.

**B.I-12****Lane**

One of the longitudinal strips into which a carriageway is divisible, whether or not defined by longitudinal road markings, which is wide enough for one moving line of motor vehicles other than motor cycles.

**B.I-13****Bus lane**

Part of a carriageway designated for buses and distinguished from the rest of the carriageway by longitudinal road markings.

*Taxis and, in some cases, cars occupied by several passengers may also be allowed to use a bus lane.*



**B.I-14 Tramline**

Line of communication made up by a pair of rails designed for use by trams (street-cars).

*This includes both tramlines laid down on the road used by other road motor vehicles as well as tramlines running separately from the road.*

**B.I-15 (Bi)cycle lane**

Part of a carriageway designated for cycles and distinguished from the rest of the carriageway by longitudinal road markings.

*Mopeds may also be allowed to use a cycle lane.*

**B.I-16 (Bi)cycle track**

Independent road or part of a road designated for cycles and sign-posted as such. A cycle track is separated from other roads or other parts of the same road by structural means.

*Mopeds may also be allowed to use the cycle track.*

**B.I-17 Length of road**

The length of the road is the distance between its start and end point.

*If one of the directions of the carriageway is longer than the other then the length is calculated as the sum of half of the distances of each direction of the carriageway from first entry point to last exit point.*

**B.I-18 Urban area**

Area within the administrative boundary or a set of administrative boundaries of a core city (settlement).

*Urban areas may be classified by size according to number of inhabitants:*

- 10 000 to 49 999 – small
- 50 000 to 249 999 – medium
- 250 000 or more – large.

*Urban areas will comprise territorial units having a larger number of inhabitants, with most of those, but not necessarily all, living in built-up areas. Built-up areas as defined in B.I-05 may include villages and towns in rural districts.*



## B.II TRANSPORT EQUIPMENT

### B.II-A VEHICLES

#### **B.II.A-01 Road vehicle**

A vehicle running on wheels and intended for use on roads.

#### **B.II.A-02 Stock of road vehicles**

Number of road vehicles registered at a given date in a country and licensed to use roads open to public traffic.

*This includes road vehicles exempted from annual taxes or license fees; it also includes imported second-hand vehicles and other road vehicles according to national practices. The statistics should exclude military vehicles.*

#### **B.II.A-03 National road vehicle**

A road vehicle registered in the reporting country and bearing registration plates of that country or having been separately registered (trams, trolleybuses, etc.).

*Where registration of a road vehicle does not apply in a specific country, a national road vehicle is a vehicle owned or leased by a person or company tax resident in that country.*

#### **B.II.A-04 Foreign road vehicle**

A road vehicle registered in a country other than the reporting country and bearing registration plates of that foreign country.

#### **B.II.A-05 (Bi)cycle**

A road vehicle which has two or more wheels and generally is propelled solely by the muscular energy of the persons on that vehicle, in particular by means of a pedal system, lever or handle (e.g. bicycles, tricycles, quadricycles and invalid carriages).

*Included are cycles with supportive power unit.*

#### **B.II.A-06 Road motor vehicle**

A road vehicle fitted with an engine whence it derives its sole means of propulsion, which is normally used for carrying persons or goods or for drawing, on the road, vehicles used for the carriage of persons or goods.

*The statistics exclude motor vehicles running on rails.*

#### **B.II.A-07 Passenger road vehicle**

A road vehicle designed, exclusively or primarily, to carry one or more persons.

*Vehicles designed for the transport of both passengers and goods should be classified either among the passenger road vehicles or among the goods road vehicles, depending on their primary purpose, as determined either by their technical characteristics or by their category for tax purposes.*



#### B.II.A-08 Passenger road motor vehicle

A road motor vehicle, exclusively designed or primarily, to carry one or more persons.

*Included are:*

- a) Motorcycles
- b) Mopeds
- c) Passenger cars
- d) Vans designed and used primarily for transport of passengers
- e) Taxis
- f) Hire cars
- g) Ambulances
- h) Buses, coaches and minibuses
- i) Tram
- jj) Motor Homes.

*Excluded are light goods vehicles, cf. definition B.II.A-22.*

#### B.II.A-09 Moped

Two, three or four-wheeled road motor vehicle which is fitted with an engine having a cylinder capacity of less than 50cc (3.05 cu.in) and a maximum authorized design speed in accordance with national regulations.

*Registered and non-registered mopeds in use are included, whether or not they have a number plate. Some countries do not register all mopeds.*



#### B.II.A-10 Motorcycle

Two-, three- or four-wheeled road motor vehicle not exceeding 400 kg (900 lb) of unladen weight. All such vehicles with a cylinder capacity of 50 cc or over are included, as are those under 50 cc which do not meet the definition of moped.





### B.II.A-11 Passenger car

Road motor vehicle, other than a moped or a motor cycle, intended for the carriage of passengers and designed to seat no more than nine persons (including the driver).

*Included are:*

- Passenger cars
- Vans designed and used primarily for transport of passengers
- Taxis
- Hire cars
- Ambulances
- Motor homes.



*Excluded are light goods road vehicles, cf. definition B.II.A-22, as well as motor-coaches and buses, cf. definitions B.II.A-15, and mini-buses/mini-coaches, cf. definitions B.II.A-17.*

*"Passenger car" includes microcars (needing no permit to be driven), taxis and passenger hire cars, provided that they have fewer than ten seats.*

### B.II.A-12 Taxi

Licensed passenger car for hire with driver without predetermined routes.

*The method of hire is normally:*

- Flagging down on the street
- Picking up at a designated taxi rank
- Telephoning for collection.

### B.II.A-13 Caravan

Road vehicle designed as living accommodation for haulage by a motor vehicle.

*A caravan is mainly intended for recreational purposes. It is not used for carriage of goods or passengers. Excluded are tent trailers with a built-in tent : they are considered as a trailer for the transport of goods.*

### B.II.A-14 Motor-coach, mini-coach, bus or mini-bus

Passenger road motor vehicle designed to seat more than nine persons (including the driver).

*Included are mini-buses and mini-coaches designed to seat more than 9 persons (including the driver).*

### B.II.A-15 Bus

Passenger road motor vehicle designed to carry more than 24 persons (including the driver), and with provision to carry seated as well as standing passengers.

*The vehicles may be constructed with areas for standing passengers, to allow frequent passenger movement, or designed to allow the carriage of standing passengers in the gangway.*





## Road transport

### B.II.A-16 Motor coach

Passenger road motor vehicle designed to seat 24 or more persons (including the driver) and constructed exclusively for the carriage of seated passengers.



### B.II.A-17 Mini-bus / mini-coach

Passenger road motor vehicle designed to carry 10- 23 seated or standing persons (including the driver).

*The vehicles may be constructed exclusively to carry seated passengers or to carry both seated and standing passengers.*



### B.II.A-18 Trolleybus

Passenger road vehicle designed to seat more than nine persons (including the driver), which is connected to electric conductors and which is not rail-borne.

*This term covers vehicles which may be used either as trolleybuses or as buses, if they have a motor independent of the main electric power supply.*



### B.II.A-19 Tram (street-car)

Passenger or freight road vehicle designed to seat more than nine persons (including the driver) or to transport freight, which is rail borne and connected to electric conductors or powered by diesel engine. The tramway is generally integrated into the urban road system.

### B.II.A-20 Passenger carrying capacity of motor coaches, buses and trolleybuses

Number of seats/berths and standing places, including the driver's, available in the vehicle when it is performing the service for which it is primarily intended.

*In case of doubt, the highest number of seats/berths available should be taken into account.*

**B.II.A-21 Goods road vehicle**

Road vehicle designed, exclusively or primarily, to carry goods.

*Included are:*

- a) *Light goods road vehicles with a gross vehicle weight of not more than 3 500 kg , designed exclusively or primarily, to carry goods, e.g. vans and pick-ups*
- b) *Heavy goods road vehicles with a gross vehicle weight above 3 500 kg, designed, exclusively or primarily, to carry goods*
- c) *Road tractors*
- d) *Agricultural tractors permitted to use roads open to public traffic.*

**B.II.A-22 Light goods road vehicle**

Goods road vehicle with a gross vehicle weight of not more than 3 500 kg, designed, exclusively or primarily, to carry goods.

*Included are vans designed for and used primarily for transport of goods, pick-ups and small lorries with a gross vehicle weight of not more than 3 500 kg.*

**B.II.A-23 Heavy goods road vehicle**

Goods road vehicle with a gross vehicle weight above 3 500 kg, designed, exclusively or primarily, to carry goods

**B.II.A-24 Types of body of goods road vehicle**

Classification of goods road vehicles by types of their superstructures.

The following classification of types of bodies of goods road vehicles is considered:

- a) Ordinary open box
  - With cover
  - Flat
- b) Tipper
- c) Tanker
  - Solid bulk
  - Liquid bulk
- d) Temperature controlled box
- e) Other closed box
- f) Skeletal container and swap-body transporter
- g) Livestock transporter
- h) Others

**B.II.A-25 Goods road motor vehicle**

Any single road motor vehicle designed to carry goods (e.g. a lorry), or any coupled combination of road vehicles designed to carry goods, (i.e. lorry with trailer(s), or road tractor with semi-trailer and with or without trailer).

**B.II.A-26 Lorry / truck**

Rigid road motor vehicle designed, exclusively or primarily, to carry goods.

**B.II.A-27 Road tractor**

Road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven (mainly semi-trailers).

*Agricultural tractors are excluded.*

**B.II.A-28 Agricultural tractor**

Motor vehicle designed exclusively or primarily for agricultural purposes whether or not permitted to use roads opened to public traffic.

**B.II.A-29 Trailer**

Goods road vehicle designed to be hauled by a road motor vehicle.

*This category excludes agricultural trailers and caravans.*

**B.II.A-30 Agricultural trailer**

Trailer designed exclusively or primarily for agricultural purposes and to be hauled by an agricultural tractor, whether or not permitted to use roads opened to public traffic.

**B.II.A-31 Semi-trailer**

Goods road vehicle with no front axle designed in such way that part of the vehicle and a substantial part of its loaded weight rests on a road tractor.

**B.II.A-32 Articulated vehicle**

Road tractor coupled to a semi-trailer.

**B.II.A-33 Road train**

Goods road motor vehicle coupled to a trailer

*Articulated vehicle with a further trailer attached is included.*



**B.II.A-34 Special purpose road motor vehicle**

Road motor vehicle designed for purposes other than the carriage of passengers or goods.

*This category includes:*

- a) Fire brigade vehicles
- b) Mobile cranes
- c) Self-propelled rollers
- d) Bulldozers with metallic wheels or track
- e) Vehicles for recording film, radio and TV broadcasting
- f) Mobile library vehicles
- g) Towing vehicles for vehicles in need of repair
- h) Other special purpose road motor vehicles.

**B.II.A-35 Load capacity**

Maximum weight of goods declared permissible by the competent authority of the country of registration of the vehicle.

**B.II.A-36 Load volume**

Maximum volume available in the vehicle (e.g. measured in cubic metres) for the carriage of goods.

**B.II.A-37 Floor area within vehicle body**

Maximum floor area within the vehicle body (e.g. measured in square metres) available for the carriage of goods.

**B.II.A-38 Gross vehicle weight (Legally permissible maximum weight)**

Total of the weight of the vehicle (or combination of vehicles) including its load when stationary and ready for the road declared permissible by the competent authority of the country of registration.

*This includes the weight of the driver and the maximum number of persons permitted to be carried.*

**B.II.A-39 Age of road vehicle**

Length of time after the first registration of the road vehicle, irrespective of the registering country.

**B.II.A-40 Cylinder capacity**

The cylinder capacity of the engine as certified by the competent authority of the country of registration.

**B.II.A-41 Unladen vehicle weight**

Weight of vehicle (or combination of vehicles) excluding its load when stationary and ready for the road, as determined by the competent authority of the country of registration.

*The unladen weight may include driver and fuel dependent on national practice.*

**B.II.A-42 Motor energy**

The principal type of motor energy used by the vehicle as certified by the competent authority of the country of registration.

*For hybrid or dual-fuelled vehicles adapted for using more than one type of motor energy (e.g. LPG and petrol, or electricity and diesel, etc.), the principal type of motor energy should be, where possible, an alternative fuel.*

**B.II.A-43 Alternative fuel**

A type of motor energy other than the conventional fuels, petrol and diesel.

*Alternative fuels include electricity, LPG, natural gas (NGL or CNG), alcohols, mixtures of alcohols with other fuels, hydrogen, biofuels (such as biodiesel), etc. (This list is not exhaustive.) Alternative fuels do not include unleaded petrol, reformulated petrol or city (low sulphur) diesel.*

**B.II.A-44 Date of first registration of motor vehicle**

The date of first registration of a motor vehicle is the first-time registration of the vehicle as new in a Motor Vehicle Register, irrespective of the nationality of the register.

*The dating of the registration is the date on which the registration was recorded at the Motor Vehicle Registration Office. The registration of an imported second-hand vehicle is not a first-time registration but should be regarded as a re-registration.*

**B.II-B** CONTAINERS ETC.**B.II.B-01 Loading unit**

Container, swap body.

"Flats" (see B.II.B-09 below) used in maritime transport are included as a special type of container.

**B.II.B-02 Intermodal transport unit (ITU)**

Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

**B.II.B-03 Container**

Special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers. A more formal technical definition of a container is:

- a) Of a permanent character and accordingly strong enough to be suitable for repeated use
- b) Specially designed to facilitate the carriage of goods, by one or more mode of transport, without intermediate reloading
- c) Fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another
- d) So designed as to be easy to fill and empty
- e) Stackable and
- f) Having an internal volume of 1 m<sup>3</sup> or more.

Swap bodies are excluded.

Although without internal volume, and therefore not satisfying criterion (f) above, flats (see B.II.B-09 below) used in maritime transport should be considered to be a special type of container and therefore are included here.

**B.II.B-04 Sizes of containers**

The main sizes of containers are:

- a) 20 Foot ISO container (length of 20 feet and width of 8 feet)
- b) 40 Foot ISO container (length of 40 feet and width of 8 feet)
- c) ISO container over 20 feet and under 40 feet of length
- d) ISO container over 40 foot long
- e) Super high cube container (oversize container)
- f) Air container (container conforming to standards laid down for air transportation).

Containers are normally 8 foot height but other heights also exist." High cube containers" are containers with a height of 9.5 foot." Super high cube containers" are containers exceeding the ISO dimensions. They include container lengths of 45 foot, 48 foot and 53 foot.

Containers sizes classified under a) to e) are referred to as large containers.

#### B.II.B-05 Tare weight of container

The tare weight of a container is included in the total weight of the containerised goods transported, also called the gross-gross weight of goods. The gross weight of containerised goods transported can be calculated from the gross-gross weight by deducting the tare weight of the container and vice versa. If information about the tare weight is missing then the tare weight may be estimated using the averages below.

*The tare weight of a container may be estimated as:*

a) 20 Foot ISO container	2.3 tonnes
b) 40 Foot ISO container	3.7 tonnes
c) ISO container over 20 feet and under 40 feet of length	3.0 tonnes
d) ISO container over 40 feet of length	4.7 tonnes.

#### B.II.B-06 Types of containers

The main types of containers, as defined by ISO Standards Handbook on Freight Containers are:

1. General purpose containers
2. Specific purpose containers
  - Closed ventilated container
  - Open top container
  - Platform based container open sided
  - Platform based container open sided with complete superstructure
  - Platform based container open sided with incomplete superstructure and fixed ends
  - Platform based container open sided with incomplete superstructure and folding ends
  - Platform (container)
3. Specific cargo containers
  - Thermal container
  - Insulated container
  - Refrigerated container - (expendable refrigerant)
  - Mechanically refrigerated container
  - Heated container
  - Refrigerated and heated container
  - Tank container
  - Dry bulk container
  - Named cargo container (such as automobile, livestock and others) and
  - Air mode container.

**B.II.B-07 TEU (Twenty-foot Equivalent Unit)**

A statistical unit based on an ISO container of 20 foot length (6.10 m) to provide a standardised measure of containers of various capacities and for describing the capacity of container ships or terminals. One 20 Foot ISO container equals 1 TEU.

*One 40 Foot ISO container equals 2 TEU*

*One container with a length between 20 and 40 foot equals 1.50 TEU*

*One container with a length of more than 40 foot equals 2.25 TEU.*

**B.II.B-08 Swap body**

A freight-carrying unit optimised to road vehicle dimensions and fitted with handling devices for transfer between modes, usually road/rail.

*Such units were not originally designed to be stacked when full or top-lifted. Many units now can be, although not to the same extent as containers. The main feature distinguishing them from containers is that they are optimised to road vehicle dimensions. Such unit would need UIC approval to be used on rail. Some swap bodies are equipped with folding legs on which the unit stands when not on the vehicle.*

**B.II.B-09 Flat**

A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings.

*This is an alternative term used for certain types of specific purpose containers - namely platform containers and platform-based containers with incomplete structures.*

**B.II.B-10 Pallet**

Raised platform, intended to facilitate the lifting and stacking of goods.

*Pallets are usually made of wood, and of standard dimensions:*

*1 000 mm x 1 200 mm (ISO) and 800mm x 1 200 mm (CEN).*

**B.II.B-11 Roll cage, roll container, roll pallet**

Small, un-stackable, normally boxy unit on wheels intended to facilitate the loading and unloading of goods.

## B.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT

### **B.III-01 Transport for hire or reward**

The carriage for remuneration of persons or goods.

### **B.III-02 Transport on own account**

Transport which is not for hire or reward.

*Such transport is the movement by an enterprise of its own staff or freight without any associated financial transaction. Although individual persons may undertake such transport, it is not included here.*

### **B.III-03 Enterprise**

Institutional unit or smallest combination of institutional units that encloses and directly or indirectly controls all necessary functions to carry out its production activities.

*The requirements of an enterprise are that it has one ownership or control. It can, however, be heterogeneous with regard to its economic activity as well as to its location.*

### **B.III-04 Road transport enterprise**

Enterprise carrying out in one or more places activities for the production of road transport services using road vehicles and whose main activity according to value added is road transport.

In terms of activity classifications the following classes are involved:

#### a) ISIC/Rev.4<sup>1</sup> : Division 49, Group 492 - Other land transport

- Class 4921 - Urban or suburban passenger land transport
- Class 4922 - Other passenger land transport
- Class 4923 - Freight transport by road

#### b) NACE/Rev.2<sup>2</sup> : Division 49, Group 49.3 - Other passenger land transport

- Class 49.31 - Urban, suburban or metropolitan area passenger land transport
- Class 49.32 - Taxi operation
- Class 49.39 - Other passenger land transport

#### c) NACE/Rev.2: Division 49, Group 49.4 - Freight transport by road

- Class 49.41 - Freight transport by road
- Class 49.42 - Removal services.

*Even those enterprises without salaried employees are taken into account. Only units, which actually carry out an activity during the reference period, should be considered. "Dormant" units or those not yet having begun their activity are excluded.*

### **B.III-05 Road passenger transport enterprise**

Road transport enterprise offering and performing services in the transport of one or more persons (passengers), not including the driver, and whose main activity in the field of road transport, according to value-added, is road passenger transport.

<sup>1</sup> ISIC Rev.4 - International Standard Industrial Classification of All Economic Activities, United Nations Statistics Division

<sup>2</sup> NACE Rev2 - Statistical Classification of Economic Activities in the European Communities, Official Journal N° L 393/1, 30 December 2006.

**B.III-06 Road goods transport enterprise**

Road transport enterprise offering and performing services in the transport of goods, whose main activity in the field of road transport, according to value-added, is road goods transport.

**B.III-07 Urban road passenger enterprise**

Road passenger transport enterprise performing urban, metropolitan or similar scheduled or non-scheduled transport services within the boundaries of one or more built-up areas and whose main activity in the field of road passenger transport, according to value-added, is urban road passenger transport.

**B.III-08 Public road transport enterprise**

Road transport enterprise which is principally owned (more than 50 % of the capital) by the State or public authorities and their enterprises.

**B.III-09 Employment**

Average number of persons working during a given period in a road transport enterprise (inclusive of working proprietors, partners working regularly in the enterprise and unpaid family workers), as well as persons working outside the enterprise but who belong to it and are directly paid by it.

*Employment may be categorized as follows:*

- a) Drivers
- b) Motor mechanics
- c) Warehousemen
- d) Fleet management staff
- e) Other office workers.

**B.III-10 Turnover**

Total amount invoiced by the road transport enterprise during the period under review. This total corresponds to market sales of services or goods supplied to third parties. Included in turnover is "other operating income" e.g. income from concessions, franchise arrangements, patents, trademarks and similar values. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the enterprise vis-à-vis its customers. It also includes all other charges to customers. Reductions in prices, rebates and discounts must be deducted, but not cash discounts.

*Turnover includes only ordinary activities and hence does not include sales of fixed assets. Operating subsidies received from public authorities are also excluded.*

**B.III-11 Investment expenditure on roads**

Expenditure on new construction and extension of existing roads, including reconstruction, renewal and major repairs.

**B.III-12 Investment expenditure on road vehicles**

Expenditure on purchases of road vehicles.

**B.III-13 Maintenance expenditure on roads**

Expenditure for keeping roads in working order.

*This includes surface maintenance, patching and running repairs (work relating to roughness of carriageway's wearing course, roadsides, etc.).*



**B.III-14 Maintenance expenditure on road vehicles**

Expenditure for keeping road vehicles in working order.



## B.IV TRAFFIC

### B.IV-01 Road traffic

Any movement of a road vehicle on a given road network.

*When a road vehicle is being carried on another vehicle, only the movement of the carrying vehicle (active mode) is considered.*

### B.IV-02 Road traffic on national territory

Any movement of road vehicles within a national territory irrespective of the country in which these vehicles are registered.

### B.IV-03 Traffic by empty road vehicles

Any movement of a road vehicle for which the gross-gross weight of goods carried including that of equipment such as containers, swap bodies and pallets is nil. Any movement of motor-coaches, buses, trolleybuses and trams without any passengers.

*The movement of a road vehicle carrying empty equipment such as containers, swap bodies and pallets is not considered as an empty journey.*

### B.IV-04 Urban road traffic

Traffic carried out in an urban area by road vehicles.

*Proportions of a through journey involving a relatively short passage over urban roads are not counted as urban traffic.*

### B.IV-05 Road traffic inside built-up areas

Traffic on roads inside built-up areas.

### B.IV-06 Road vehicle journey

A movement of a road vehicle from a specified point of origin to a specified point of destination.

*A journey can be divided into a number of sections or stages.*

### B.IV-07 Vehicle-kilometre

Unit of measurement representing the movement of a road vehicle over one kilometre.

*The distance to be considered is the distance actually run. It includes movements of empty road motor vehicles. Units made up of a tractor and a semi-trailer or a lorry and a trailer are counted as one vehicle.*

### B.IV-08 Entry of a road vehicle into a country

Any loaded or empty road motor vehicle which entered a country by road.

*If a road motor vehicle is entering the country by another mode of transport, only the active mode is considered to have entered that country.*

### B.IV-09 Exit of a road vehicle from a country

Any loaded or empty road motor vehicle which leaves a country by road.

*If a road motor vehicle is leaving the country by another mode of transport, only the active mode is considered as leaving that country.*

**B.IV-10    Transit of road vehicle**

Any loaded or empty road motor vehicle, which enters and leaves the country at different points by whatever means of transport, provided the total journey within the country is by road and that there is no loading or unloading in the country.

*Road motor vehicles loaded/unloaded at the frontier of that country onto/from another mode of transport are included.*

**B.IV-11    Annual average daily traffic flow**

Average flow of vehicles past a specific enumeration point on the road network.

*Counting may be performed manually or automatically, continuously or in selected periods.*

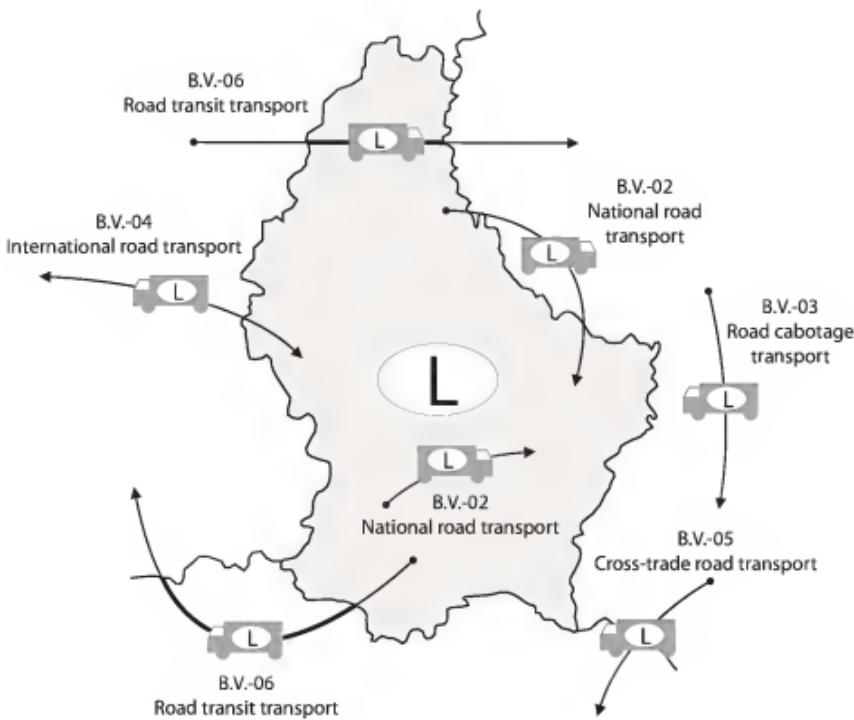


## B.V TRANSPORT MEASUREMENT

### B.V-01 Road transport

Any movements of goods and/or passengers using a road vehicle on a given road network.

*When a road vehicle is being carried on another vehicle, only the movement of the carrying vehicle (active mode) is considered.*



**B.V-02 National road transport**

Road transport between two places (a place of loading/embarkation and a place of unloading/ disembarkation) located in the same country irrespective of the country in which the road motor vehicle is registered. It may involve transit through a second country.

*Uncoupling of a trailer/semi-trailer from a road motor vehicle and coupling of the trailer/semi-trailer to another road motor vehicle is considered as unloading and loading of the goods in the trailer/semi-trailer.*

**B.V-03 Road cabotage transport**

Road transport within a country other than the registration country, performed by a road motor vehicle registered in the reporting country.

**B.V-04 International road transport**

Road transport between a place of loading/embarkation or unloading/disembarkation in the reporting country and a place of loading/embarkation or unloading/disembarkation in another country.

*Such transport may involve transit through one or more additional country or countries.*

**B.V-05 Cross-trade road transport**

Road transport performed by a road motor vehicle registered in one country between a place of loading/ embarkation in a second country and a place of unloading/disembarkation in a third country.

*Such transport may involve transit through one or more additional country or countries*

**B.V-06 Road transit transport**

Road transport through a country between two places (a place of loading and a place of unloading) both located in another country or in other countries provided that the total journey within the country is by road and that there is no loading and unloading in that country.

*Road motor vehicles loaded/unloaded at the frontier of that country onto/from another mode of transport are included.*

**B.V-07 Urban road transport**

Transport carried out on urban roads or tramways.

*Only transport mainly or solely performed on urban roads is considered to be urban transport.*

**B.V-08 Road passenger**

Any person who makes a journey by a road vehicle. Drivers of passenger cars, excluding taxi drivers, are counted as passengers. Service staff assigned to buses, motor coaches, trolleybuses, trams and goods road vehicles are not included as passengers.

**B.V-09 Road passenger-kilometre**

Unit of measurement representing the transport of one passenger by road over one kilometre.

*The distance to be taken into consideration is the distance actually travelled by the passenger.*

**B.V-10 Road passenger trip**

The combination between the place of embarkation and the place of disembarkation of passengers conveyed by a road vehicle.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-11 Public road transport**

Public road transport covers passenger transport by bus or tram in scheduled service, whether operated by a public or private enterprise.

**B.V-12 Road passenger trip on public road transport**

The combination between the place of embarkation and the place of disembarkation of passengers conveyed by bus or tram.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-13 Road passenger embarked on a public transport road vehicle**

Passenger who boards a road vehicle to be conveyed by it.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall if possible not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-14 Road passenger disembarked from a public transport road vehicle**

A passenger alighting from a road vehicle after having been conveyed by it.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall if possible not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-15 Road passenger transport link**

The combination of the place of embarkation and the place of disembarkation of the passengers conveyed by road whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics - Eurostat).*

**B.V-16 Place of embarkation**

The place taken into account is the place where the passenger boarded a road vehicle to be conveyed by it.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall if possible not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-17 Place of disembarkation**

The place taken into account is the place where the passenger alighted from a road vehicle after having been conveyed by it.

*A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall if possible not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.*

**B.V-18 Goods carried by road**

Any goods moved by road goods vehicles.

*This includes all packaging and equipment such as containers, swap bodies or pallets.*

**B.V-19 Gross-gross weight of goods**

The total weight of the goods carried, all packaging and the tare weight of the transport unit (e.g. containers, swap bodies and pallets for containing goods)

**B.V-20 Gross weight of goods**

The total weight of goods carried, including packaging but excluding the tare weight of the transport unit (e.g. containers, swap bodies and pallets for containing goods).

**B.V-21 Tare weight**

The weight of a transport unit (e.g. containers, swap-bodies and pallets for containing goods) before any cargo is loaded.

**B.V-22 Tonne-kilometre by road**

Unit of measurement of goods transport which represents the transport of one tonne by road over one kilometre.

*The distance to be taken into consideration is the distance actually run.*

**B.V-23 TEU-kilometre by road**

Unit of measurement of container transport which represents the transport of one TEU by road over one kilometre.

*The distance to be taken into consideration is the distance actually run.*

**B.V-24 Types of goods carried**

Goods in transport may be classified according to type.

*Examples of classification schemes are NST 2007 (Standard Goods Nomenclature for Transport Statistics) that replaces the CSTE nomenclature (Commodity Classification for Transport Statistics in Europe - UNECE) and the NST/R nomenclature (Standard Goods Nomenclature for Transport Statistics/revised - Eurostat).*

**B.V-25 Types of cargo carried**

Goods in transport may be classified according to the UNECE – Codes for types of cargo, packages and packaging materials, Recommendation 21, Geneva March 1986. The cargo classes are:

- Liquid bulk
- Solid bulk
- Large freight container
- Other freight container
- Palletised goods
- Pre-slung goods
- Mobile, self-propelled units
- Other mobile units
- Other cargo types.

**B.V-26 Dangerous goods**

The classes of dangerous goods carried by Road are those defined by the fifteenth revised edition of the UN Recommendations on the Transport of Dangerous Goods, United Nations, Geneva 2007.

- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable liquids
- Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases
- Class 5: Oxidizing substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive material
- Class 8: Corrosive substances
- Class 9: Miscellaneous dangerous substances and articles.

**B.V-27 Goods loaded**

Goods placed on a road vehicle and dispatched by road.

*Transhipment from one goods road vehicle to another or change of the road tractor are regarded as loading after unloading.*

**B.V-28 Goods unloaded**

Goods taken off a road vehicle after transport by road.

*Transhipment from one goods road vehicle to another or change of the road tractor are regarded as unloading before reloading.*

**B.V-29 Goods having left the country by road (other than goods in transit by road throughout)**

Goods which having been loaded on a road vehicle in the country, left the country by road and were unloaded in another country.

**B.V-30 Goods having entered the country by road (other than goods in transit by road throughout)**

Goods which, having been loaded on a road vehicle in another country, entered the country by road and were unloaded there.

**B.V-31 Goods in transit by road throughout**

Goods which entered the country by road and left the country by road at a point different from the point of entry, after having been carried across the country in the same goods road motor vehicle.

*Transhipment from one goods road vehicle to another or change of the road tractor are regarded as loading/unloading.*

**B.V-32 Goods road transport link**

The combination of the place of loading and the place of unloading of the goods transported by road whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics - Eurostat).*

**B.V-33 Place of loading**

The place taken into account for loading is the place where the goods were loaded on a goods road motor vehicle or where the road tractor has been changed.

**B.V-34 Place of unloading**

The place taken into account is the place where the goods were unloaded from a goods road motor vehicle or where the road tractor has been changed.

**B.V-35 Use of transport capacity**

Indicator of the use of the transport capacity.

*The indicators can be calculated as the actual transported amount of goods or passengers in percentage of the capacity of the vehicle measured in weight, volume, area of body or allowed number of seated or standing passengers (as defined in B.II.A-20, B.II.A-35 and B.II.A-36).*

*Taking into account the transported distance and gradually unloading during a journey, an alternative indicator can be calculated as the actual transport performance in percentage of the maximum possible transport performance for the actual journeys.*



## B.VI ENERGY CONSUMPTION

### B.VI-01 Energy consumption by road transport

Final energy consumed by road motor vehicles.

*Included is the energy used for propulsion of means of transport and for lifting by built-in crane, lighting, heating and other types of comfort in means of transport. Final energy consumed by unloaded road vehicles is also included.*

### B.VI-02 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption: 1 TOE = 0.041868 TJ.

Conversion factors adopted by the International Energy Agency (IEA) for 1991 are the following:

- Motor gasoline	1.070
- Gas/diesel oil	1.035
- Heavy fuel oil	0.960
- Liquefied petroleum gas	1.130
- Natural gas	0.917.

The conversion factor used by the IEA for electricity is: 1 TWh = 0.086 Mtoe.

### B.VI-03 Joule

Unit of measurement of energy consumption:

1 terajoule =  $10^{12}$  Joule =  $2.78 \times 10^3$  kWh

1 terajoule = 23.88459 TOE.

### B.VI-04 Motor gasoline (petrol)

Light hydrocarbon oil for use in internal combustion engines, excluding those in aircraft.

*Motor gasoline is distilled between 35°C and 215°C and is used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL (Tetraethyl lead) and TML (Tetramethyl lead).*

Calorific value: 44.8 TJ/1 000 t.

### B.VI-05 Gas/diesel oil (distillate fuel oil)

Oil obtained from the lowest fraction from atmospheric distillation of crude oil.

*Gas/diesel oil includes heavy gas oils obtained by vacuum re-distillation of the residual from atmospheric distillation. Gas/diesel oil distils between 200°C and 380°C, with less than 65 per cent in volume at 250°C, including losses, and 80 per cent or more at 350°C. The flashpoint is always above 50°C and their density is higher than 0.81. Heavy oils obtained by blending are grouped together with gas oils, provided that their kinematic viscosity does not exceed 25 cSt at 40°C.*

Calorific value: 43.3 TJ/1 000 t.

**B.VI-06 Liquefied petroleum gases (LPG)**

Light hydrocarbons of the paraffin series which are derived solely from the distillation of crude oil.

The LPG comprises propane and butane or a mixture of these two hydrocarbons. They can be liquefied under low pressure (5-10 atmospheres). In the liquid state and at a temperature of 38°C they have a relative vapour pressure less than or equal to 24.5 bars. Their specific gravity ranges from 0.50 to 0.58.

**B.VI-07 Natural gas liquids (NGL)**

Liquid or liquefied hydrocarbons produced in the manufacture, purification and stabilization of natural gas. Their characteristics vary, ranging from those of ethane, butane and propane to heavy oils. NGL's are distilled with crude oil in refineries, blended with refined petroleum products or used directly depending on their characteristics.

**B.VI-08 Electric power**

Energy produced by hydroelectric, geothermal, nuclear and conventional thermal power stations, excluding energy produced by pumping stations, measured by the calorific value of electricity (3.6 TJ/GWh).

*Pumping station is a power station with a reservoir which is filled by the use of pumps.*



## B.VII ACCIDENTS

### B.VII-01 Injury accident

Any accident involving at least one road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one injured or killed person.

*A suicide or an attempted suicide is not an accident but an incident caused by a deliberate act to injure oneself fatally. However, if a suicide or an attempted suicide causes injury to another road user, then the incident is regarded as an injury accident.*

*Included are: collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles and with one road vehicle alone. Included are collisions between road and rail vehicles. Multi-vehicle collisions are counted as only one accident provided that any successive collisions happen within a very short time period. Injury accidents exclude accidents incurring only material damage.*

*Excluded are terrorist acts.*

### B.VII-02 Fatal accident

Any injury accident resulting in a person killed.

### B.VII-03 Non-fatal accident

Any injury accident other than a fatal accident.

### B.VII-04 Casualty

Any person killed or injured as a result of an injury accident.

### B.VII-05 Person killed

Any person killed immediately or dying within 30 days as a result of an injury accident, excluding suicides.

*A killed person is excluded if the competent authority declares the cause of death to be suicide, i.e. a deliberate act to injure oneself resulting in death. For countries that do not apply the threshold of 30 days, conversion coefficients are estimated so that comparisons on the basis of the 30 day-definition can be made.*

### B.VII-06 Person injured:

Any person who as result of an injury accident was not killed immediately or not dying within 30 days, but sustained an injury, normally needing medical treatment, excluding attempted suicides.

*Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.*

*An injured person is excluded if the competent authority declares the cause of the injury to be attempted suicide by that person, i.e. a deliberate act to injure oneself resulting in injury, but not in death.*

### B.VII-07 Person seriously injured:

Any person injured who was hospitalized for a period of more than 24 hours.

### B.VII-08 Person slightly injured:

Any person injured excluding persons killed or seriously injured.

*Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.*

**B.VII-09 Driver involved in an injury accident**

Any person involved in an injury accident who was driving a road vehicle at the time of the accident.

**B.VII-10 Passenger involved in an injury accident**

Any person involved in an injury accident, other than a driver, who was in or on a road vehicle, or in the process of getting in or out of a road vehicle.

**B.VII-11 Pedestrian involved in an injury accident**

Any person involved in an injury accident other than a passenger or driver as defined above.

*Included are occupants or persons pushing or pulling a child's carriage, an invalid chair, or any other small vehicle without an engine. Also included are persons pushing a cycle, moped, roller-skating, skateboarding, skiing or using similar devices.*

**B.VII-12 Accident between road vehicle and pedestrian**

Any injury accident involving one or more road vehicle and one or more pedestrian.

*Included are accidents irrespective of whether a pedestrian was involved in the first or a later phase of the accident and whether a pedestrian was injured or killed on or off the road.*

**B.VII-13 Single-vehicle road accident**

Any injury accident in which only one road vehicle is involved.

*Included are accidents of vehicles trying to avoid collision and veering off the road, or accidents caused by collision with obstruction or animals on the road. Excluded are collisions with pedestrians and parked vehicles.*

**B.VII-14 Multi-vehicle road accident**

Any injury accident involving two or more road vehicles.

The following types of injury accidents involving two or more road vehicles are:

- a) Rear-end collision: collision with another vehicle using the same lane of a carriageway and moving in the same direction, slowing or temporarily halted

*Excluded are collisions with parked vehicles.*

- b) Head-on collision: collision with another vehicle using the same lane of a carriageway and moving in the opposite direction, slowing or temporarily halted

*Excluded are collisions with parked vehicles.*

- c) Collision due to crossing or turning: collision with another vehicle moving in a lateral direction due to crossing, leaving or entering a road

*Excluded are collisions with vehicles halted and waiting to turn which should be classified under (a) or (b).*

- d) Other collisions, including collisions with parked vehicles: collision occurring when driving side by side, overtaking or when changing lanes; or collision with a vehicle which has parked or stopped at the edge of a carriageway, on shoulders, marked parking spaces, footpaths or parking sites, etc.

*Included in B-VII-14 (d) are all collisions not covered by (a), (b) and (c). The constituent element for classification of accidents between vehicles is the first collision on the carriageway, or the first mechanical impact on the vehicle.*

**B.VII-15      Accident with drivers reported under the influence of alcohol, drugs or medication**

Any injury accident where at least one driver is reported to be under the influence of alcohol, drugs or medication impairing driving ability, according to national regulations.

**B.VII-16      Daylight**

As reported by the police or other authorities.

**B.VII-17      Darkness**

As reported by the police or other authorities.

**B.VII-18      Twilight (or unknown)**

As reported by the police or other authorities.

A residual category covering cases where daylight conditions were very poor or where no information on light conditions was available.

**B.VII-19      Dry road surface**

A road surface not covered by water, snow, ice or other substances.

**B.VII-20      Other road surface**

Any road surface other than dry road surface.

C

## Inland Waterway Transport







## C.I INFRASTRUCTURE

### C.I-01 Waterway

River, canal, lake or other stretch of water which by natural or man-made features is suitable for navigation.

*Waterways of a maritime character (waterways designated by the reporting country as suitable for navigation primarily by seagoing inland waterway vessels) are included. Waterways also include river estuaries; the boundary being that point nearest the sea where the width of the river is both less than 3 km at low water and less than 5 km at high water.*

### C.I-02 Navigable inland waterway

A stretch of water, not part of the sea, which by natural or man-made features is suitable for navigation, primarily by inland waterway vessels. This term covers navigable rivers, lakes, canals and estuaries.

*The length of rivers and canals is measured in mid-channel. The length of lakes and lagoons is measured along the shortest navigable route between the most distant points to and from which transport operations are performed. A waterway forming a common frontier between two countries is reported by both.*

### C.I-03 Navigable river

Natural waterway open for navigation, irrespective of whether it has been improved for that purpose.

### C.I-04 Navigable lake

Natural expanse of water open for navigation.

*Lagoons (brackish water area separated from the sea by a coastal bank) are included.*

### C.I-05 Navigable canal

Waterway built primarily for navigation.

### C.I-06 Navigable inland waterway network

All navigable inland waterways open for public navigation in a given area.

### C.I-07 Categories of navigable inland waterways

Taking into account the 1992 UNECE/ECMT Classification of European Inland Waterways, canals, navigable rivers and lakes the different categories are defined as follows:

By horizontal dimensions of vessels and pushed convoys

Class	(length/beam)
I to III	Up to 80/9 m.
IV	80-85/9.50 m.
V a	95-110/11.40 m.
V b	172-175/11.40 m.
VI a	95-110/22.80 m.
VI b	185-195/22.80 m.
VI c	270-280/22.80 or 195-200/33-34.20 m.
VII	285/33-34.20 m and over.

*In some cases the "carrying capacity of vessels" may be used to classify the navigable inland waterways.*

**C.I-08 Port**

A place for vessels to moor and to load or unload cargo or to disembark or embark passengers to or from vessels, usually directly to a pier.

**C.I-09 Statistical port**

A statistical port consists of one or more ports, normally controlled by a single port authority, able to record ship and cargo movements.

**C.I-10 UN/LOCODE**

5 character code where the first two characters are the ISO 3 166 country codes while the remaining three are derived from Recommendation 16 from the UNECE in Geneva, together with Eurostat supplied codes for ports not yet included in the UN system.

**C.I-11 Port quay lengths**

Total quay length in metres.

**C.I-12 Ro-Ro berth**

A location at which a Ro-Ro vessel can berth and load and unload motor vehicles and other mobile Ro-Ro units via ramps from ship to shore and vice versa.

**C.I-13 Port cranes by lifting capacity**

Number of cranes available in ports by lifting capacity.

*Possible classes of lifting capacity are as follows :*

- a) 10 tonnes or less
- b) Greater than 10 tonnes and up to 20 tonnes
- c) Greater than 20 tonnes and up to 40 tonnes
- d) Greater than 40 tonnes.

**C.I-14 Port cranes by type**

Number of cranes available in ports by type :

- a) Mobile container cranes
- b) Other container cranes
- c) Other crane.

**C.I-15 Connections to other modes of transport**

Availability and distance from ports to connections to other modes of transport in km :

- a) Maritime shipping
- b) Passenger rail connection
- c) Freight rail connection
- d) Motorway access
- e) Airport

**C.I-16 Landing stages**

A place solely for vessels to embark or disembark passengers, not part of an inland port.

**C.I-17 Lock**

An enclosure in an inland waterway with gates at each end to enable the water level to be raised or lowered to allow vessels to pass through. Lift locks are included.

*Lift lock is a machine for transporting vessels between water at two different elevations.*





## C.II TRANSPORT EQUIPMENT

### C.II.A VESSELS

#### C.II.A-01 IWT vessel

A floating craft designed for the carriage of goods, public transport of passengers or specially fitted out for a specific commercial duty which navigates predominantly in navigable inland waterways or in waters within, or closely adjacent to sheltered waters or areas where port regulations apply.

*Vessels under repair are included. Vessels suitable for inland navigation but which are authorized to navigate at sea (mixed seagoing and inland waterway vessels) are included. This category excludes: harbour craft, seaport lighters and seaport tugs, ferries, fishery vessels, dredgers, vessels performing hydraulic work and vessels used exclusively for storage, floating workshops, houseboats and pleasure craft.*

#### C.II.A-02 National IWT vessel

IWT vessel which is registered at a given date in the reporting country.

*Where registration of IWT vessels does not apply in a specific country, a national IWT vessel is a vessel owned by a company tax resident in that country.*

#### C.II.A-03 Foreign IWT vessel

IWT vessel which is registered at a given date in a country other than the reporting country.

#### C.II.A-04 Fluvio-maritime vessel

Any IWT vessel designed and authorised to operate also as a sea going vessel.

#### C.II.A-05 IWT freight vessel

Vessel with a carrying capacity of not less than 20 tonnes designed for the carriage of freight by navigable inland waterways.

#### C.II.A-06 IWT passenger vessel

Vessel designed specifically to carry more than 12 fare-paying passengers by navigable inland waterways.

#### C.II.A-07 IWT container vessel

Vessel fitted throughout with fixed or portable cell guides mainly for the carriage of containers.

#### C.II.A-08 Inland waterway fleet

Number of IWT vessels registered at a given date in a country and authorized to use inland waterways.

*Changes in the fleet refer to changes, in total or within a vessel type, in the inland waterway fleet of the reporting country, resulting from new construction, modification in type or capacity, purchases or sales abroad, scrapping, casualties, or transfers to or from the maritime register.*

#### C.II.A-09 Self-propelled barge

Any powered inland waterways freight vessel, other than self-propelled tanker barges.

*Towed barges, pushed barges and pushed-towed barges which have an auxiliary engine only must be regarded as towed barges, pushed barges or pushed-towed barges as the case may be. The fact that a self-propelled barge can be used for towing does not change its nature.*



**C.II.A-10 Self-propelled pusher barge**

Self-propelled barge designed or fitted to push pushed or pushed-towed barges.

**C.II.A-11 Dumb barge**

IWT freight vessel designed to be towed which does not have its own means of mechanical propulsion.

*The fact that a dumb barge is fitted with an auxiliary engine does not change its nature.*

**C.II.A-12 Pushed barge**

IWT freight vessel which is designed to be pushed and does not have its own means of mechanical propulsion.

*The fact that a pushed barge is fitted with an auxiliary engine does not change its nature.*

**C.II.A-13 Pushed-towed barge**

IWT freight vessel which is designed to be either pushed or towed and does not have its own means of mechanical propulsion.

*The fact that a pushed-towed barge is fitted with an auxiliary engine does not change its nature.*

**C.II.A-14 Self-propelled tanker barge**

A self-propelled barge intended for the bulk transport of liquids or gases in fixed tanks.

*Tankers for the transport in bulk of powdered products such as cement, flour, plaster, etc., are to be excluded and are to be counted among self-propelled barges.*

**C.II.A-15 Self-propelled pusher tanker barge**

Self-propelled pusher barge for the bulk transport of liquids or gases.

*Tankers for the transport in bulk of powdered products such as cement, flour, plaster, etc., are to be excluded and are to be counted among self-propelled pusher barges.*

**C.II.A-16 Dumb tanker barge**

Dumb barge for the bulk transport of liquids or gases.

*Tankers for the transport in bulk of powdered products such as cement, flour, plaster, etc., are to be excluded and are to be counted among dumb barges.*

**C.II.A-17 Pushed tanker barge**

Pushed barge for the bulk transport of liquids or gases.

*Tankers for the transport in bulk of powdered products such as cement, flour, plaster, etc., are to be excluded and are to be counted among pushed barges.*

**C.II.A-18 Pushed-towed tanker barge**

Pushed-towed barge for the bulk transport of liquids or gases.

*Tankers for the transport in bulk of powdered products such as cement, flour, plaster etc., are to be excluded and are to be counted among pushed-towed barges.*

**C.II.A-19 Other goods carrying vessel**

Any other inland waterways freight vessel intended for carrying goods not covered in the previous categories.

**C.II.A-20 Tug**

Powered vessel developing not less than 37 kW and designed for the towing of dumb barges, pushed-towed barges, and rafts, but not for the carriage of goods.

*Port and sea tugs are excluded.*

**C.II.A-21 Pusher vessel**

Powered vessel developing not less than 37 kW and designed or fitted for the pushing of pushed or pushed-towed barges but not for the carriage of goods.

*Port pusher vessels are excluded.*

**C.II.A-22 Pusher tug**

Powered vessel developing not less than 37 kW and designed or fitted for the towing of dumb barges, pushed-towed barges, or rafts, and for the pushing of pushed and pushed-towed barges, but not for the carriage of goods.

**C.II.A-23 Carrying capacity of an IWT freight vessel**

Maximum authorised weight of goods, expressed in tonnes, which a vessel may carry.

**C.II.A-24 Capacity of an IWT passenger vessel**

Maximum authorised number of passengers that a vessel may carry.

**C.II.A-25 Power (kW)**

Mechanical force developed by the motive power installation in a vessel.

*This power should be measured in effective kilowatts (power transmitted to the propeller):*

*1 kW=1.36 h.p.; 1 h.p. = 0.735 kW.*

**C.II.A-26 Year of construction of vessel**

Year of original construction of the hull.



## C.II.B CONTAINER, ETC.

### C.II.B-01 Loading unit

Container, swap body.

*"Flats" (see C.II.B-09 below) used in maritime transport are included as a special type of container*

### C.II.B-02 Intermodal transport unit (ITU)

Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

### C.II.B-03 Container

Special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers. A more formal technical definition of a container is:

- a) Article of transport equipment which is:
- b) Of a permanent character and accordingly strong enough to be suitable for repeated use
- c) Specially designed to facilitate the carriage of goods, by one or more mode of transport without intermediate reloading
- d) Fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another
- e) So designed as to be easy to fill and empty
- f) Stackable and
- g) Having an internal volume of 1 m<sup>3</sup> or more.

*Swap bodies are excluded.*

*Although without internal volume, and therefore not satisfying criterion (f) above, flats (see C.II.B-09 below) used in maritime transport should be considered to be a special type of container and therefore are included here.*

### C.II.B-04 Sizes of containers

The main sizes of containers are:

- a) 20 Foot ISO container (length of 20 feet and width of 8 feet)
- b) 40 Foot ISO container (length of 40 feet and width of 8 feet)
- c) ISO container over 20 feet and under 40 feet of length
- d) ISO container over 40 foot long
- e) Super high cube container (oversize container)
- f) Air container (container conforming to standards laid down for air transportation).

*Containers are normally 8 foot height but other heights also exist. "High cube containers" are containers with a height of 9.5 foot. "Super high cube containers" are containers exceeding the ISO dimensions. They include container lengths of 45 foot, 48 foot and 53 foot.*

*Containers sizes classified under a) to e) are referred to as large containers.*

### C.II.B-05 Tare weight of container

The tare weight of a container is included in the total weight of the containerised goods transported, also called the gross-gross weight of goods. The gross weight of containerised goods transported can be calculated from the gross-gross weight by deducting the tare weight of the container and vice versa. If information about the tare weight is missing then the tare weight may be estimated using the averages below.



The tare weight of a container may be estimated as:

- |   |             |
|---|-------------|
| a) 20 Foot ISO container                                  | 2.3 tonnes  |
| b) 40 Foot ISO container                                  | 3.7 tonnes  |
| c) ISO container over 20 feet and under 40 feet of length | 3.0 tonnes  |
| d) ISO container over 40 feet of length                   | 4.7 tonnes. |

#### C.II.B-06 Types of containers

The main types of containers, as defined by ISO Standards Handbook on Freight Containers are:

1. General purpose containers
2. Specific purpose containers
  - Closed ventilated container
  - Open top container
  - Platform based container open sided
  - Platform based container open sided with complete superstructure
  - Platform based container open sided with incomplete superstructure and fixed ends
  - Platform based container open sided with incomplete superstructure and folding ends
  - Platform (container)
3. Specific cargo containers
  - Thermal container
  - Insulated container
  - Refrigerated container - (expendable refrigerant)
  - Mechanically refrigerated container
  - Heated container
  - Refrigerated and heated container
  - Tank container
  - Dry bulk container
  - Named cargo container (such as automobile, livestock and others); and
  - Air mode container.

#### C.II.B-07 TEU (Twenty-foot Equivalent Unit)

A statistical unit based on an ISO container of 20 foot length (6.10 m) to provide a standardised measure of containers of various capacities and for describing the capacity of container ships or terminals. One 20 Foot ISO container equals 1 TEU.

One 40 Foot ISO container equals two 2 TEU.

One container with a length between 20 and 40 foot equals 1.50 TEU.

One container with a length of more than 40 foot equals 2.25 TEU.

#### C.II.B-08 Swap body

A freight-carrying unit optimised to road vehicle dimensions and fitted with handling devices for transfer between modes, usually road/rail.

*Such units were not originally designed to be stacked when full or top-lifted. Many units now can be, although not*



*to the same extent as containers. The main feature distinguishing them from containers is that they are optimised to road vehicle dimensions. Such unit would need UIC approval to be used on rail. Some swap bodies are equipped with folding legs on which the unit stands when not on the vehicle.*

#### C.II.B-09 **Flat**

A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings.

*This is an alternative term used for certain types of specific purpose containers namely platform containers and platform-based containers with incomplete structures.*

#### C.II.B-10 **Pallet**

Raised platform, intended to facilitate the lifting and stacking of goods.

*Pallets are usually made of wood, and of standard dimensions:*

*1 000 mm x 1 200 mm (ISO) and 800 mm x 1 200 mm (CEN).*

#### C.II.B-11 **Ro-Ro unit**

Wheeled equipment for carrying goods, such as a lorry, trailer or semi-trailer, which can be driven or towed onto a vessel or train.

*Port or vessels' trailers are included in this definition.*

#### C.II.B-12 **Gantry crane**

An overhead crane comprising a horizontal gantry mounted on legs, which are either fixed, run in fixed tracks or on rubber tyres with relatively limited manoeuvre. The load can be moved horizontally, vertically and sideways.

*Such cranes normally straddle a road/rail and/or ship/shore interchange.*

#### C.II.B-13 **Straddle carrier**

A rubber-tyred overhead lifting vehicle for moving or stacking containers on a level reinforced surface.

#### C.II.B-14 **Reach stacker**

Tractor vehicle with front equipment for lifting, stacking or moving ITUs.

#### C.II.B-15 **Fork lift truck**

Vehicle equipped with power-driven horizontal forks, which allow it to lift, move or stack pallets, containers or swap bodies. The latter two are usually empty.

#### C.II.B-16 **Spreader**

Adjustable fitting on lifting equipment designed to connect with the upper corner fittings of an ITU.

Many spreaders have in addition grapple arms that engage the bottom side rails of an ITU.



## C.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT

### C.III-01 Enterprise

Institutional unit or smallest combination of institutional units that encloses and directly or indirectly controls all necessary functions to carry out its production activities.

*The requirements of an enterprise are that it has one ownership or control. It can, however, be heterogeneous with regard to its economic activity as well as to its location. Even those enterprises without salaried employees are taken into account. Only units that actually carry out an activity during the reference period should be included. "Dormant" units or those that have not as yet begun their activity are excluded.*

### C.III-02 Inland Waterways Transport (IWT) Enterprise

Enterprise carrying out in one or more places activities for the production of IWT services using IWT vessels and whose main activities according to the value added is inland waterway transport and services allied to inland waterway transport.

*In terms of activity classifications the following classes are involved:*

- ISIC/Rev.4:<sup>3</sup> Class 5022 - Inland waterway transport
- NACE/Rev.2:<sup>4</sup> Class 5040 - Fluvial transport.

### C.III-03 Public IWT enterprise

IWT enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.

### C.III-04 Inland waterways port enterprise

An enterprise carrying out in one or more places the provision of inland waterway port services and the main activity of which according to value added is the provision of inland waterway port services. Pleasure port enterprises are excluded.

*In terms of activity classifications, the following classes are involved:*

- ISIC/Rev.4 5022 – Service activities incidental to water transportation  
5224 – Cargo handling
- NACE/Rev.2 50.22 – Service activities incidental to water transportation  
52.24 – Cargo handling.

*Note: ISIC 9329 and NACE 93.29 include pleasure port activities.*

### C.III-05 Public inland waterways port enterprise

A port enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.

### C.III-06 Employment

Average number of persons working during a given period in an IWT enterprise (inclusive of working owners, partners working regularly in the enterprise and unpaid family workers), as well as persons working outside the enterprise but who belong to it and are directly paid by it.

<sup>3</sup> ISIC/Rev.4 - International Standard Industrial Classification of all economic activities, United Nations Statistical Division. (Draft)

<sup>4</sup> NACE Rev.2 - Standard Classification of Economic Activities in the European Union. Official Journal N° L 393/1, 30 December 2006.

**C.III-07 Turnover**

Total amount invoiced by the IWT enterprise during the period under review. This total corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the unit vis-à-vis its customers. It also includes all other charges to customers. Reductions in prices, rebates and discounts as well as the value of returned packing must be deducted, but not cash discounts.

*Turnover includes only ordinary activities and hence does not include sales of fixed assets. Operating subsidies received from public authorities are also excluded.*

**C.III-08 Investment expenditure on infrastructure**

Expenditure on new construction and extension of existing infrastructure, including reconstruction, renewal and major repairs.

*Expenditure on locks is included.*

**C.III-09 Investment expenditure on vessels**

Expenditure on purchase of vessels.

**C.III-10 Maintenance expenditure on infrastructure**

Expenditure for keeping infrastructure in working order.

*Expenditure on locks is included.*

**C.III-11 Maintenance expenditure on vessels**

Expenditure for keeping vessels in working order.



## C.IV TRAFFIC

### C.IV-01 Inland waterway traffic

Any movement of an IWT vessel on a given IWT network.

*When a vessel is being carried on another vehicle, only the movement of the carrying vehicle (active mode) is taken into account.*

### C.IV-02 Inland waterway traffic on national territory

Any movement of an IWT vessel within a national territory irrespective of the country in which the vessel is registered.

### C.IV-03 Unladen inland waterway traffic

Any movement of an IWT freight vessel for which the gross-gross weight of goods carried, including that of equipment such as containers, swap-bodies and pallets, is nil; as well as any movement of an IWT passenger vessel without passengers.

*The movement of an IWT vessel carrying empty equipment such as containers, swap-bodies and pallets is not considered to be an unladen journey.*

### C.IV-04 Inland waterway journey

Any movement of an IWT vessel from a specified point of origin to a specified point of destination.

*Journey can be divided in a number of stages or sections.*

### C.IV-05 Vessel-kilometre

Unit of measurement representing the movement of an IWT vessel over one kilometre.

The distance taken into account is the distance actually run. Movements of unladen vessels are included. In a convoy, each unit is counted as a vessel.

### C.IV-06 Inland waterway convoy

One or more non-powered IWT vessels which are towed or pushed by one or more powered IWT vessels.



### C.IV-07 Convoy-kilometre

Unit of measurement of traffic representing the movement of convoy over one kilometre on an inland waterway.

*The distance taken into account is the distance actually run. Movements of unladen individual vessels or convoys are included.*

**C.IV-08 Tonne-kilometre offered**

Unit of measurement representing the movement of one tonne of capacity available in an IWT freight vessel when performing the services for which it is primarily intended over one kilometre.

*The distance to be considered is the distance actually run.*

**C.IV-09 Seat-kilometre offered**

Unit of measurement representing the movement over one kilometre of one seat available in an IWT passenger vessel when performing the services for which it is primarily intended over one kilometre.

*The distance to be considered is the distance actually run.*

**C.IV-10 Entry of an IWT vessel**

Any laden or unladen IWT vessel which entered the country by inland waterway.

*If an IWT vessel is entering the country by another mode of transport, only the active mode is considered to have entered that country.*

**C.IV-11 Exit of an IWT vessel**

Any laden or unladen IWT vessel which left the country by inland waterway.

If an IWT vessel is leaving the country by another mode of transport, only the active mode is considered as leaving that country.

**C.IV-12 Transit of an IWT vessel**

Any loaded or empty IWT vessel, which enters and leaves the country at different points by whatever means of transport, provided the total journey within the country is by inland waterways and that there is no loading or unloading in the country.

*IWT vessels loaded/unloaded at the frontier of that country onto/from another mode of transport are included.*

**C.V. TRANSPORT MEASUREMENT****C.V-01 Inland waterway transport (IWT)**

Any movement of goods and/or passengers using IWT vessels which is undertaken wholly or partly on navigable inland waterways.

*Bunkers and stores supplied to vessels in port are excluded When an IWT vessel is being carried on another vehicle, only the movement of the carrying vehicle (active mode) is taken into account.*

**C.V-02 National inland waterway transport**

Any movement of goods and/or passengers using an Inland Waterways Transport (IWT) vessel between two places (a place of loading/embarkation and a place of unloading/dissemination) within a national territory irrespective of the country in which the IWT vessel is registered. It may involve transit through a second country, although for this country this transport has to be reported as transit.

**C.V-03 Inland movement**

Any movement of goods and/or passengers to and from inland ports connected by water routes which may be made navigable by one or more lock structures.

**C.V-04 Inland waterway cabotage transport**

National IWT performed by an IWT vessel registered in another country.

**C.V-05 International inland waterway transport**

Inland waterway transport between two places (a place of loading/embarkation and a place of unloading/dissemination) located in two different countries. It may involve transit through one or more additional countries. For the latter countries this transport has to be reported as transit.

**C.V-06 Cross-trade inland waterway transport**

Inland waterway transport conducted by an enterprise of one country between a place of loading/embarkation in a second country and a place of unloading/dissemination in a third country.

*Such transport may involve transit through one or more additional country or countries.*

**C.V-07 Fluvio maritime transport**

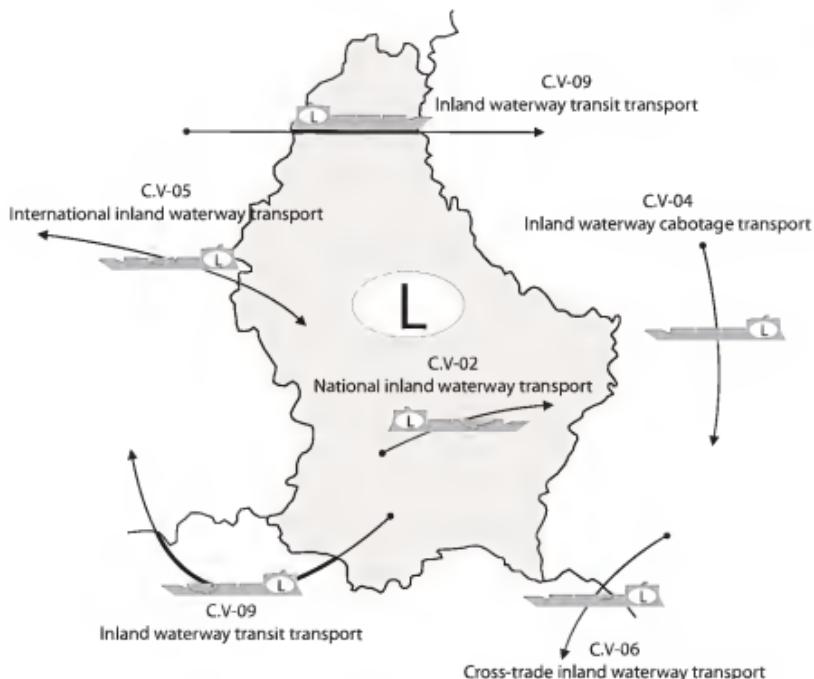
A transport operation partly by inland waterways and partly by sea, without transhipment. It can be operated by inland waterway vessel or seagoing ships.

*Any inland waterway vessel undertaking such transport will need to have the appropriate authorisation permitting it to operate at sea.*

**C.V-08 Inland waterway transit transport**

Inland waterway transport through a country between two places (a place of loading/embarkation and a place of unloading/dissemination) both located in another country or in other countries provided that the total journey within the country is by inland waterways and that there is no loading/embarkation and unloading/dissemination operation in that country.

*IWT vessels loaded/unloaded at the frontier of that country onto/from another mode of transport are included.*



#### **C.V-09 Urban inland waterway transport**

Transport carried out on inland waterways located within the boundaries of an urban area.

*Only transport carried out mainly or solely on inland waterways located within the boundaries of a built-up area is regarded as urban transport.*

#### **C.V-10 Inland waterways passenger**

Any person who makes a journey on board of an IWT vessel. Service staff assigned to IWT vessels are not regarded as passengers.

#### **C.V-11 Passenger-kilometre by inland waterways**

Unit of measurement representing the transport of one passenger by inland waterways over one kilometre.

*The distance to be taken into consideration is the distance actually travelled by the passenger.*

#### **C.V-12 Inland waterway passenger embarked**

Passenger who boards an IWT vessel to be conveyed by it.

*A transfer from one IWT vessel to another is regarded as embarkation after disembarkation.*

**C.V-13 Inland waterway passenger disembarked**

A passenger disembarking from an IWT vessel after having been conveyed by it.

*A transfer from one IWT vessel to another is regarded as disembarkation before re-embarkation.*

**C.V-14 Inland waterway passenger transport link**

The combination of the place of embarkation and the place of disembarkation of the passenger conveyed by inland waterways whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics - Eurostat).*

**C.V-15 Place of embarkation**

The place taken into account is the place where the passenger boarded an IWT vessel to be conveyed by it.

*A transfer from one IWT vessel to another is regarded as embarkation after disembarkation.*

**C.V-16 Place of disembarkation**

The place taken into account is the place where the passenger disembarked from an IWT vessel after having been conveyed by it.

*A transfer from one IWT vessel to another is regarded as disembarkation before re-embarkation.*

**C.V-17 Goods carried by inland waterways**

Any goods moved by IWT freight vessel.

This includes all packaging and equipment such as containers, swap-bodies or pallets.

**C.V-18 Gross-Gross Weight of goods**

The total weight of the goods carried, all packaging and the tare weight of the transport units (e.g. containers, swap bodies and pallets for containing goods as well as goods road vehicles carried on the vessel).

**C.V-19 Gross Weight of goods**

The total weight of goods carried, including packaging but excluding the tare weight of transport units (e.g. containers, swap bodies and pallets for containing goods as well as goods road vehicles carried on the vessel).

**C.V-20 Tare Weight**

The weight of a transport unit (e.g. containers, swap-bodies and pallets for containing goods as well as road goods vehicles carried on the vessel) before any cargo is loaded.

**C.V-21 Tonne-kilometre by inland waterways**

Unit of measurement of goods transport which represents the transport of one tonne by inland waterways over one kilometre.

*The distance taken into account is the distance performed in the reporting country.*

**C.V-22 TEU-km by inland waterways**

Unit for measuring the goods transport by containers equivalent to one TEU transported over a distance of one kilometre.

*For the purpose of reporting the TEU-km performance only the distance travelled on navigable inland waterways performed in the reporting country has to be taken into account.*



#### C.V-23 Types of goods carried by inland waterways

Goods in transport may be classified according to type.

*Examples of classification schemes are NST 2007 (Standard Goods Nomenclature for Transport Statistics) that replaces the CSTE nomenclature (Commodity Classification for Transport Statistics in Europe - UNECE) and the NST/R nomenclature (Standard Goods Nomenclature for Transport Statistics/revised - Eurostat).*

#### C.V-24 Dangerous goods

The classes of dangerous goods carried by Inland Waterways are those defined by the fifteenth revised edition of the UN Recommendations on the Transport of Dangerous Goods, United Nations, Geneva 2007.

- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable liquids
- Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases
- Class 5: Oxidizing substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive material
- Class 8: Corrosive substances
- Class 9: Miscellaneous dangerous substances and articles.

#### C.V-25 Goods loaded

Goods placed on an IWT vessel and dispatched by inland waterways.

*Transhipment from one IWT vessel to another is regarded as loading after unloading. The same applies to changes of pusher tugs or tugs.*

#### C.V-26 Goods unloaded

Goods taken off an IWT vessel after transport by inland waterways.

*Transhipment from one IWT vessel to another is regarded as unloading before re-loading. The same applies to changes of pusher tugs and tugs.*

#### C.V-27 Goods IWT link

The combination of the place of loading and the place of unloading of the goods transported by inland waterways whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics - Eurostat).*

#### C.V-28 Place of loading

The place taken into account is the place where the goods were loaded on an IWT freight vessel or where pusher tugs and tugs have been changed.

#### C.V-29 Place of unloading

The place taken into account is the place where the goods were unloaded from an IWT freight vessel or where pusher tugs and tugs have been changed.



## Inland waterways

### C.V-30    **Country / region of loading / embarkation**

The country or region of ports where transported goods are loaded or passengers embark on a vessel.

### C.V-31    **Country / region of unloading / disembarkation**

The country or region of ports where transported goods are unloaded or passengers disembark from a vessel.



## C.VI ENERGY CONSUMPTION

### C.VI - 01 Energy consumption by IWT

Final energy consumption by IWT vessels.

*This includes final energy consumption by unladen IWT vessels.*

### C.VI - 02 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption: 1 TOE = 0.041868 TJ.

Conversion factors adopted by the International Energy Agency (IEA) for 1991 are as follows:

- Motor gasoline	1.070
- Gas/diesel oil	1.035
- Heavy fuel oil	0.960
- Liquefied petroleum gas	1.130
- Natural gas	0.917.

The conversion factor used by the IEA for electricity is: 1 TWh = 0.086 Mtoe.

### C.VI - 03 Joule

Unit of measurement of energy consumption:

1 terajoule =  $10^{12}$  J =  $2.78 \times 10^6$  kWh

1 terajoule = 23.88459 TOE.

### C.VI - 04 Motor gasoline (petrol)

Light hydrocarbon oil for use in internal combustion engines, excluding those in aircraft.

*Motor gasoline is distilled between 35°C and 215°C and is used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL (Tetraethyl lead) and TML (Tetramethyl lead).*

Calorific value: 44.8 TJ/1 000 t.

### C.VI - 05 Gas/diesel oil (distillate fuel oil)

Oil obtained from the lowest fraction from atmospheric distillation of crude oil.

*Gas/diesel oil includes heavy gas oils obtained by vacuum re-distillation of the residual from atmospheric distillation. Gas/diesel oil distils between 200°C and 380°C, with less than 65 per cent in volume at 250°C, including losses, and 80 per cent or more at 350°C. The flash point is always above 50°C and their density is higher than 0.81. Heavy oils obtained by blending are grouped together with gas oils, provided that their kinematic viscosity does not exceed 25 cSt at 40°C.*

Calorific value: 43.3 TJ/1 000 t.

**C.VII ACCIDENTS****C.VII-01 Accident**

Unwanted or unintended sudden event or a specific chain of such events which have harmful consequences.

**C.VII-02 Inland Waterways accident**

An IWT accident is a specific, identifiable, unexpected, unusual and unintended external event caused by, or in connection with, the operation of an IWT vessel resulting in an IWT casualty or incident which occurs in a particular time and place, without apparent cause but with marked effect.

*By definition suicides are excluded as they are a deliberate act. For this reason neither the UIC in its rail accident statistics nor the international road accident statistics take them into account.*

*Because of their importance, suicide statistics should be collected separately. Terrorist and criminal acts are excluded.*

**C.VII-03 Injury accident**

Any accident involving at least one IWT vessel in motion on an inland waterway and resulting in at least one injured or killed person.

*A suicide or an attempted suicide is not an accident but an incident caused by a deliberate act to injure oneself fatally. However, if a suicide or an attempted suicide causes injury to another person on an IWT vessel, then the incident is regarded as an injury accident.*

*Injury accident excludes accidents incurring only material damage.*

**C.VII-04 Fatal accident**

Any injury accident resulting in a person killed.

**C.VII-05 Non-fatal accident**

Any injury accident other than a fatal accident.

**C.VII-06 Person killed**

Any person killed immediately or dying within 30 days as a result of an injury accident, excluding suicides.

*A killed person is excluded if the competent authority declares the cause of death to be suicide, i.e. a deliberate act to injure oneself resulting in death.*

*For countries that do not apply the threshold of 30 days, conversion coefficients are estimated so that comparisons on the basis of the 30 day-definition can be made.*

**C.VII-07 Person injured:**

Any person who as result of an injury accident was not killed immediately or not dying within 30 days, but sustained an injury, normally needing medical treatment, excluding attempted suicides.

*Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.*

*An injured person is excluded if the competent authority declares the cause of the injury to be attempted suicide, i.e. a deliberate act to injure oneself resulting in injury, but not in death.*

**C.VII-08 Serious injury**

An injury which is sustained by a person in a casualty resulting in incapacitation for more than 72 hours commencing within seven days from the date of injury.

**C.VII-09 Person seriously injured:**

Any person injured who was hospitalized for a period of more than 24 hours.

**C.VII-10 Person slightly injured:**

Any person injured excluding persons seriously injured.

*Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.*

**C.VII-11 Inland waterway casualty**

An event that has resulted in any of the following

- a) The death of, or serious injury to, a person that is caused by, or in connection with, the operations of a IWT vessel; or
- b) The loss of a person from a IWT vessel that is caused by, or in connection with, the operations of a IWT vessel; or
- c) The loss, presumed loss or abandonment of a IWT vessel; or
- d) Material damage to a IWT vessel; or
- e) The stranding or disabling of a IWT vessel, or the involvement of a IWT vessel in a collision; or
- f) Material damage being caused by, or in connection with, the operation of a IWT vessel; or
- g) Damage to the environment brought about by the damage of an IWT vessel or IWT vessels being caused by, or in connection with, the operations of an IWT vessel or IWT vessels.

**C.VII-12 Very serious casualty**

A casualty to an IWT vessel which involves the total loss of the IWT vessel, loss of life or severe pollution.

**C.VII-13 Serious casualty**

A casualty which does not qualify as a very serious casualty and which involves:

- A fire, explosion, grounding, contact, heavy weather damage, ice damage, hull cracking or suspected hull defect, etc., resulting in :
  - Structural damage rendering the IWT vessel not navigable, such as penetration of the hull underwater, immobilization of main engines, extensive accommodation damage etc.; or
  - Pollution (regardless of quantity); and/or
  - A breakdown necessitating towage or assistance from the bank.

**C.VII-14 Inland waterway incident**

An occurrence or event being caused by, or in connection with, the operations of a IWT vessel by which the IWT vessel or any person is imperilled, or as a result of which serious damage to the IWT vessel or structure or the environment might be caused.

**C.VII-15 Causes of an inland waterways accident**

Actions, omissions, events, existing or pre-existing conditions or a combination thereof, which led to an IWT casualty or incident.



**C.VII-16 Daylight**

As reported by the police or other authorities.

**C.VII-17 Darkness**

As reported by the police or other authorities.

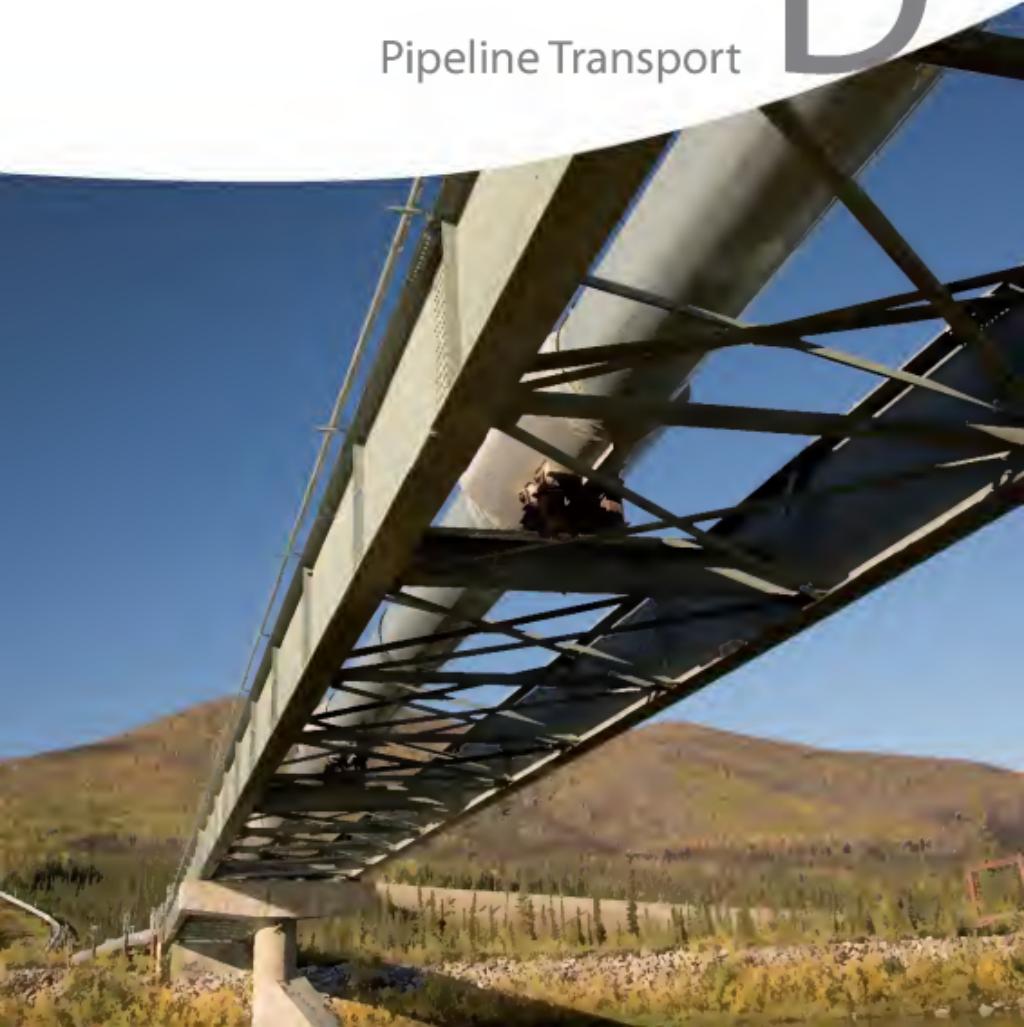
**C.VII-18 Twilight (or unknown)**

As reported by the police or other authorities.

*A residual category covering cases where daylight conditions were very poor or where no information on light conditions was available.*

D

## Pipeline Transport







## D.I INFRASTRUCTURE/ TRANSPORT EQUIPMENT

### D.I-01 Pipelines

A closed conduit, with pumps, valves and control devices, for conveying fluids, gases, or finely divided solids by pumping or compression.

*Only units which actually carry out an activity during the reference period should be considered. "Dormant" units or those not yet having begun their activity are excluded.*

### D.I-02 Pipeline Facility

New and existing piping, rights-of-way, and any equipment, facility, or building used in the transportation of gas, hazardous liquids, or carbon dioxide, or in the treatment of gas during the course of transportation.

### D.I/II-03 Pipeline network

All pipelines in a given area.

*Pipelines of the national territory includes pipelines on the seabed of the state.*

### D.I/II-04 Oil pipeline

All parts of a pipeline facility through which oil or petroleum products move including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

### D.I/II-05 Gas Pipeline

All parts of the pipe conduit, complete with such equipment as valves, compressor stations, communications systems, and meters for transporting natural and/or supplemental gas from one point to another, usually from a point in or beyond the producing field or processing plant to another pipeline or to points of utilization.

### D.I/II-06 Types of oil and gas pipelines

In general, pipelines can be classified in three main categories depending on their main purpose. The categories are as follows:

#### 1. Gathering Pipelines

Group of smaller interconnected pipelines forming complex networks with the main purpose of bringing crude oil or natural gas from several nearby wells to a treatment plant or processing facility.

*In this group, pipelines are usually short, couple of hundred of metres, and with small diameters. Also sub-sea pipelines for collecting product from deep water production platforms are considered gathering systems.*

#### 2. Transportation Pipelines (Trunk pipelines)

Mainly long pipes with large diameters, moving products (oil, gas, refined products) between cities, countries and even continents. These transportation networks include several compressor stations in gas lines or pump stations for crude and multi-product pipelines.

*Branch lines, where they satisfy the requirements for transportation pipelines, are included as well as pipelines between the land and drilling platforms at sea. Excluded are pipelines whose total length is less than 50 km or whose inside diameter is less than 15 centimetres and pipelines used only for military purposes or located entirely within the site boundaries of an industrial operation, as well as pipelines that are entirely off shore (i.e. located solely out in the open sea). International pipelines whose total length is 50 km or more are included even if the section in the reporting country is less than 50 km long. Pipelines consisting of two (or more) parallel pipelines are to be counted twice (or more).*

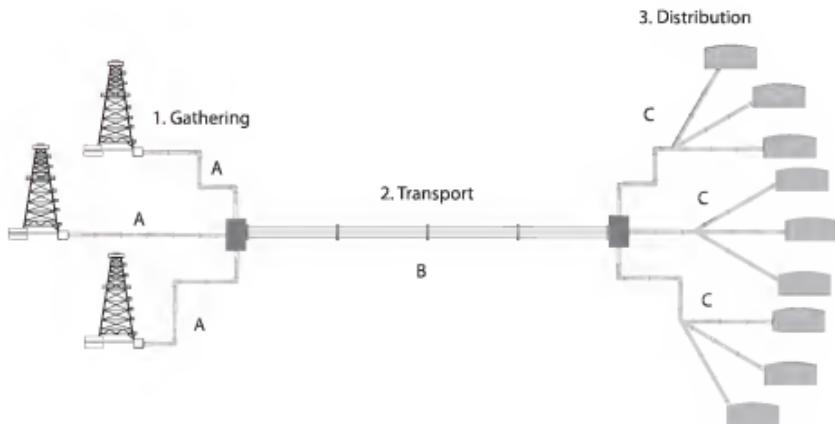


### 3. Distribution Pipelines .

Composed of several interconnected pipelines with small diameters, used to take the products to the final consumer.

*Basically, feeder lines to distribute gas to homes and businesses downstream, or pipelines at terminals to distribute final products to tanks and storage facilities are included in this group.*

#### D.I/II-06 Types of oil and gas pipelines





## D.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT

### D.III-01 Enterprise

Institutional unit or smallest combination of institutional units that encloses and directly or indirectly controls all necessary functions to carry out its production activities.

*The requirements of an enterprise are that it has one ownership or control. It can, however, be heterogeneous with regard to its economic activity as well as to its location.*

### D.III-02 Pipeline transport enterprise

Enterprise formed to carry out in one or more places activities for the provision of transport services through oil or gas pipelines and whose main activity according to the value added is the transportation of goods through oil or gas pipelines.

*In terms of activity classifications the following classes are involved:*

- ISIC/Rev.4<sup>5</sup> : 4930 - Transport via pipelines
- NACE/Rev.2<sup>6</sup> : 49.50 - Transport via pipelines.

### D.III-03 Public pipeline transport enterprise

A pipeline transport enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.

### D.III-04 Employment

Average number of persons working during a given period in a pipeline transport enterprise and persons working outside the enterprise but who belong to it and are directly paid by it.

### D.III-05 Turnover

Total amount invoiced by the pipeline transport enterprise during the period under review. This corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the unit vis-à-vis its customers. It also includes all other charges to the customers. Reductions in prices, rebates and discounts must be deducted, but not cash discounts.

*Turnover does not include sales of fixed assets. Operating subsidies received from public authorities are also excluded.*

### D.III-06 Investment expenditure on infrastructure

Expenditure for the construction of new infrastructure or the extension of existing infrastructure, including reconstruction, renewal and major repairs.

*Expenditure on pumping and compression facilities is included.*

### D.III-07 Maintenance expenditure on infrastructure

Expenditure for keeping infrastructure in working order.

*Expenditure on pumping and compression facilities is included.*

5 ISIC Rev.4 - International Standard Industrial Classification of All Economic Activities, Statistical papers, United Nations.

6 NACE Rev.2 - Statistical Classification of Economic Activities in the European Union, Official Journal of the European Union N° L 393/1, 30 December 2006.



## D.IV/V TRAFFIC/TRANSPORT MEASUREMENT

### D.IV/V-01 Pipeline transport

Any movement of crude or refined liquid petroleum products or gases in a given pipeline network.

### D.IV/V-02 National oil pipeline transport

Oil pipeline transport between two places (a pumping-in place and a pumping-out place) located in the same country or in the part of the seabed that is allocated to it. It may involve transit through a second country.

### D.IV/V-03 National gas pipeline transport

Gas pipeline transport between two places (an initial compression facility and a decompressing facility) located in the same country or in the part of the seabed that is allocated to it. It may involve transit through a second country.

### D.IV/V-04 International oil pipeline transport

Oil pipeline transport between two places (a pumping-in place and a pumping-out place) located in two different countries or on those parts of the seabed allocated to them. It may involve transit through one or more additional countries.

### D.IV/V-05 International gas pipeline transport

Gas pipeline transport between two places (an initial compression facility and a decompression facility) located in two different countries or on those parts of the seabed allocated to them. It may involve transit through one or more additional countries.

### D.IV/V-06 Transport capacity of a pipeline

Maximum tonnage of the product that the pipeline is able to move during a given period.

*In the case of multi-product pipelines, either the average density of the products or the density of the product that is predominantly moved through the pipeline shall be used to convert the capacity – which is usually measured in barrels or in cubic meters per given period – into tonnes.*

### D.IV/V-07 Goods transported by pipeline

Any gas, natural or manufactured, liquefied or in the gaseous state<sup>7</sup>, crude oil<sup>8</sup> or refined petroleum product<sup>9</sup> moved by pipelines.

### D.IV/V-08 Crude Oil

A mixture of hydrocarbons that exists in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities.

### D.IV/V-09 Refined Petroleum Products

Refined petroleum products include but are not limited to gasoline, kerosene, distillates (including No. 2 fuel oil), liquefied petroleum gas, asphalt, lubricating oils, diesel fuels, and residual fuels.

7 SITC/Rev. 4, Division 34, Standard International Trade Classification, Statistical Papers, Series M, No. 34/Rev. 4, United Nations, 2006.

8 SITC/Rev. 4, Class 333, Standard International Trade Classification, Statistical Papers, Series M, No. 34/Rev. 4, United Nations, 2006.

9 SITC/Rev. 4, Class 334 - Standard International Trade Classification, Statistical Papers, Series M, No. 34/Rev. 4, United Nations, 2006.



#### **D.IV/V-10 Liquefied Natural Gas (LNG)**

Natural gas consists mainly of methane occurring naturally in underground deposits, associated with crude oil or gas recovered from coal mines (colliery gas). To facilitate its transportation, natural gas may be converted to liquid form by reducing its temperature to:

- 160°C under atmospheric pressure. It then becomes liquefied natural gas (LNG).

*The density of LNG is between 0.44 and 0.47 tonnes per cubic metre, depending on its composition.*

#### **D.IV/V-11 Liquid Petroleum Gas (LPG)**

Consists of propane and butane and is usually derived from natural gas.

*In locations where there is no natural gas and the gasoline consumption is low, naphtha is converted to LPG by catalytic reforming.*

#### **D.IV/V-12 Tonne-kilometre by pipeline**

Unit of measurement of transport which represents transport of one tonne of goods by pipeline over one kilometre.

*The distance taken into account is the distance actually run.*

#### **D.IV/V-13 Goods having left the country by pipeline (other than goods in transit by pipeline throughout)**

Goods which, having been loaded into a pipeline by pumping or compression in one country or that part of the seabed allocated to it, left the country by pipeline and were delivered in another country.

#### **D.IV/V-14 Goods having entered the country by pipeline (other than goods in transit by pipeline throughout)**

Goods which, having been loaded into a pipeline by pumping or compression in another country or that part of the seabed allocated to it, entered the country by pipeline and were delivered there.

#### **D.IV/V-15 Pipeline transit transport**

Goods which entered the country by pipeline and left the country by pipeline at a point different from the point of entry, after having been transported across the country solely by pipeline.

*Goods which entered and/or left the country in question by vessels before loading into by pumping or compression or after delivery from a pipeline at the frontier are included.*

#### **D.IV/V-16 Goods pipeline transport link**

The combination of the loading place by pumping or compression and the delivery place of the goods transported by pipeline whichever itinerary is followed.

*Places are defined by using international classification systems such as NUTS (Nomenclature of Territorial Units for Statistics used by Eurostat).*

#### **D.IV/V-17 Location of the initial pumping-in or compression station place**

The place taken into account is the place at which the goods were first pumped-in or first compressed into a pipeline.

#### **D.IV/V-18 Pumping out or gas delivery place**

The place taken into account is the place at which the goods were pumped out or delivered from a pipeline.



## D.VI ENERGY CONSUMPTION

### D.VI-01 Energy consumed for transport by oil pipeline

Final energy consumed for movement of products by oil pipeline.

### D.VI-02 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption: 1 TOE = 0.041868 TJ.

*Factors for converting one metric ton of oil product into one TOE as adopted by the International Energy Agency (IEA):*

- Motor gasoline	1.070
- Gas/diesel oil	1.035
- Heavy fuel oil	0.960
- Liquefied petroleum gas	1.130
- Natural gas	0.917.

*The conversion factor used by the IEA for electricity is: 1 TWh = 0.086 Mtoe.*

### D.VI-03 Joule

Unit of measurement of energy consumption:

1 terajoule =  $10^{12}$  J =  $2.78 \times 10^5$  kWh

1 terajoule = 23.88459 TOE.

### D.VI-04 Motor gasoline (petrol)

Light hydrocarbon oil for use in internal combustion engines, excluding those in aircraft.

*Motor gasoline is distilled between 35°C and 215°C and is used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL (Tetraethyl lead) and TML (Tetramethyl lead).*

Calorific value: 44.8 TJ/1 000 L

### D.VI-05 Gas/diesel oil (distillate fuel oil)

Oil obtained from the lowest fraction from atmospheric distillation of crude oil.

*Gas/diesel oil includes heavy gas oils obtained by vacuum re-distillation of the residual from atmospheric distillation. Gas/diesel oil distils between 200°C and 380°C, with less than 65 per cent in volume at 250°C, including losses, and 80 per cent or more at 350°C. The flash-point is always above 50°C and their density is higher than 0.81. Heavy oils obtained by blending are grouped together with gas oils, provided that their kinematic viscosity does not exceed 25 cSt at 40°C.*

Calorific value: 43.3 TJ/1 000 t.

### D.VI-06 Liquefied petroleum gases (LPG)

Light hydrocarbons of the paraffin series which are derived solely from the distillation of crude oil.

*The LPG comprise propane and butane or a mixture of these two hydrocarbons. They can be liquefied under low pressure (5–10 atmospheres). In the liquid state and at a temperature of 38°C they have a relative vapour pressure less than or equal to 24.5 bars. Their specific gravity ranges from 0.50 to 0.58.*

**D.VI-07 Liquefied natural gas (LNG)**

Natural gas consists mainly of methane occurring naturally in underground deposits, associated with crude oil or gas recovered from coal mines (colliery gas). To facilitate its transportation, natural gas may be converted to liquid form by reducing its temperature to

- 160°C under atmospheric pressure. It then becomes liquefied natural gas (LNG).

*The density of LNG is between 0.44 and 0.47 tonnes per cubic meter, depending on its composition.*

**D.VI-08 Natural Gas Liquids (NGL):**

NGL are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants. Natural gas liquids include ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus (sometimes referred to as natural gasoline or plant condensate).

**D.VI-09 Electrical energy**

Energy produced from conventional thermal, nuclear, hydro-electric, geothermal or other renewable sources excluding the energy excluded energy produced by hydro-electric pumping stations, measured by the calorific value of electricity (3.6TJ/GWh).



E

Maritime Transport







## E.I INFRASTRUCTURE

### E.I-01 **Maritime coastal area**

A maritime coastal area is normally defined as a contiguous stretch of coastline, together with islands offshore. It is defined either in terms of one or more ranges of ports along the coastline, or in terms of the latitude and longitude of one or more sets of extremities of the coastal area.

*River banks can be included. For some countries, two separate stretches of coastline may be counted as one maritime coastal area, as, for example, the Atlantic and Pacific coastlines of Mexico.*

### E.I-02 **Port**

A place having facilities for merchant ships to moor and to load or unload cargo or to disembark or embark passengers to or from vessels, usually directly to a pier.

### E.I-03 **Statistical port**

A statistical port consists of one or more ports, normally controlled by a single port authority, able to record ship and cargo movements.

### E.I-04 **Hub port**

A port served by deep sea scheduled shipping and by scheduled short sea shipping.

### E.I-05 **UN/LOCODE**

5 character code where the first two characters are the ISO 3166 country codes while the remaining three are derived from Recommendation 16 from the UNECE in Geneva, together with Eurostat supplied codes for ports not yet included in the UN system.

### E.I-06 **Port accessibility - maritime**

Port accessibility is defined by the following characteristics:

- a) Maximum length of vessel which can be accommodated at the port - metres
- b) Maximum draft of vessel which can be accommodated at the port - metres
- c) Port approach width and depth above low water- metres
- d) Entrance channel width and depth above low water - metres
- e) Tidal window in hours for which vessels of maximum draft can enter and leave port
- f) Height restrictions above high water - metres (reflecting bridges)
- g) Tidal range – metres.

**E.I-07 Port land side facilities**

- a) Total port land area - m<sup>2</sup>
- b) Crude oil and petroleum products storage areas - m<sup>2</sup>
- c) Other bulk storage and stacking areas - m<sup>2</sup>
- d) Container stacking areas - in m<sup>2</sup> and TEU
- e) Other areas - m<sup>2</sup>
- f) Roads - m
- g) Rail track - m
- h) Passenger terminals - number and number of vessels accommodated per terminal.

*The bulk storage and stacking area includes facilities for dry bulks, timber, paper, semi bulks etc. Rail track includes sidings.*

**E.I-08 Port storage areas**

Area in m<sup>2</sup> in ports for storage by type of facility. Height in metres for covered areas.

- a) Open, not securely enclosed
- b) Open and securely enclosed
- c) Covered but not enclosed
- d) Covered, enclosed.

*A securely enclosed area has fences, walls and/or surveillance systems.*

**E.I-09 Port quay lengths by use**

- a) Total quay length in metres
- b) Quay length in metres allocated by use
  - Multi-service quays
  - Dedicated quays
    - Ro-Ro
    - Containers
    - Other General Cargo
    - Dry Bulk
    - Liquid Bulk
    - Passenger
    - Fishing
  - Other.



#### E.I-10 Port quay lengths by depth of water

Quay lengths in metres available by depth of water for ships moored alongside at low tide.

*Possible depth ranges for collection are as follows:*

- Up to 4 metres
- More than 4 and up to 6 metres
- More than 6 and up to 8 metres
- More than 8 and up to 10 metres
- More than 10 and up to 12 metres
- More than 12 and up to 14 metres
- More than 14 metres.

#### E.I-11 Ro-Ro berth

A location at which a Ro-Ro ship can berth and load and unload motor vehicles and other mobile Ro-Ro units via ramps from ship to shore and vice versa.



#### E.I-12 Port cranes by lifting capacity

Number of cranes available in ports by lifting capacity.

*Possible classes of lifting capacity are as follows:*

- 10 tonnes or less
- Greater than 10 tonnes and up to 20 tonnes
- Greater than 20 tonnes and up to 40 tonnes
- Greater than 40 tonnes.

#### E.I-13 Port cranes by type

Number of cranes available in ports by type

- Mobile container cranes
- Other container cranes
- Other crane.

**E.I-14 Port repair facilities**

Repair facilities at ports by number and by maximum size of vessel accommodated

- a) Dry docks
- b) Floating docks
- c) Slipways
- d) Dedicated ship repair quays.

**E.I-15 Port navigation aids and services**

Availability or not of navigation aids and services a) at ports and b) in the approach channels

- a) Pilotage services
- b) Lights and lighthouses
- c) Radar and radio beacons
- d) Vessel Traffic System (VTS) within port and coastal navigation services around port
- e) Tugs for in-port manoeuvring - number
- f) Escort tugs for tankers - number
- g) Bunkering facilities
- h) Mooring services.

**E.I-16 Port hinterland links and short sea shipping**

Availability of short sea shipping and availability and distance to hinterland links from nearest port entrance in kms

- a) Short sea shipping
- b) Passenger railhead
- c) Freight railhead
- d) Motorway access
- e) Inland waterway connections
- f) Airport.



## E.II TRANSPORT EQUIPMENT (VESSELS)

### E.II.A VESSELS

#### **E.II.A-01 Seagoing vessel**

Floating marine structure with one or more surface displacement hulls.

*Hydrofoil, air cushion vehicles (hovercraft), catamarans (high speed craft), oil rigs, light vessels and seagoing barges are included. Vessels under repair are included. Vessels, which navigate exclusively in inland waterways or in waters within, or closely adjacent to, sheltered waters or areas where port regulations apply, are excluded.*

#### **E.II.A-02 Year of construction of vessel**

Year of the completion of construction of a vessel.

#### **E.II.A-03 Year of last major refit or modification**

The year in which a vessel last underwent a major modification or refit affecting its structure.

#### **E.II.A-04 Dry cargo seagoing barge**

This category includes deck barges, hopper barges, lash-seabee barges, open dry cargo barges, covered dry cargo barges and other dry cargo barges.

#### **E.II.A-05 Ship (Boat)**

Seagoing self-propelled surface-displacement vessel.

*Catamarans (High Speed Craft) are included. Hydrofoil, air cushion vehicles (hovercraft), submersibles and submarines are excluded. A seagoing ship actually goes to sea, that is, outside the boundary within which inland waterway technical safety regulations apply, and outside which the ship's operators must satisfy the seagoing regulations.*

#### **E.II.A-06 Merchant ship**

Ship designed for the carriage of goods, transport of passengers or specially fitted out for a specific commercial duty.

*Naval ships and ships used by public administration and public services are excluded. Merchant ships are divided into cargo and passenger carrying ships and ships of miscellaneous activities, specially fitted out for a specific duty. Ships of miscellaneous activities include fish catching and processing ships, tugs, dredgers, research/survey ships, and ships used in offshore production and support.*

*While the following specific types are identified, based on the Eurostat classification (ICST-COM) which is harmonised with the UNCTAD International Classification of Ship Types, barges are treated separately and not included in the definition of a Merchant ship:*

##### *1. Liquid bulk carrier*

*This category includes oil tankers, chemical tankers, LG tanker, tanker barge and other tankers. Liquid bulk carriers should be further subdivided into*

- (a) Single hulled liquid bulk carriers*
- (b) Double hulled liquid bulk carriers.*



2. *Dry bulk carrier*

*This category includes bulk/oil carriers and bulk carriers.*



3. *Container ship*

*Ship fitted throughout with fixed or portable cell guides for the exclusive carriage of containers.*



4. *Specialised carrier*

*Ship specially designed for the carriage of particular cargoes.*

*This category includes vehicle carrier, livestock carrier, irradiated fuel carrier, barge carrier and chemical carrier.*



5. *General cargo non-specialised*

*Ships designed to carry a wide range of goods*

*This category includes reefer, ro-ro passenger, ro-ro container, other ro-ro cargo, combination carrier general cargo/passenger and combination carrier general cargo/container.*

*This category should be subdivided into*

*(a) High speed general cargo non-specialised meeting the requirements set out in the IMO HSC Code paragraph 1.4.30*

*(b) Other general cargo non-specialised.*



**6. Dry cargo barge**

*This category includes deck barges, hopper barges, lash-seabee barges, open dry cargo barges, covered dry cargo barges and other dry cargo barges.*

**7. Passenger ship**

*Ship designed specifically to carry more than 12 fare-paying passengers whether berthed or unberthed.*

*This category should be subdivided into*

(a) *High speed passenger ship specialised meeting the requirements set out in the IMO HSS Code paragraph 1.4.30*

(b) *Other passenger ships*

*A ship designed with one or more decks specifically for the carriage of passengers, and where there is either no cabin accommodation for the passengers (unberthed) or not all of the passengers are accommodated in cabins where cabins are provided, is sometimes referred to as a "ferry".*



*Ro-Ro passenger ships are excluded.*

**8. Fishing**

*This category includes fish catching and fish processing vessels.*

**9. Offshore activities**

*This category includes drilling and exploration vessels and offshore support vessels.*

**10. Tugs**

*Ship designed for the towing and/or pushing of ships or other floating structures. Port tugs are included.*

**11. Miscellaneous**

*This category includes dredgers, research/survey vessels and other vessels.*

*For the purposes of reporting to the Directive on Maritime Statistics number 95/64/EC, the ship types included are liquid bulk carriers, dry bulk carriers, container ships, specialised carriers, general cargo non-specialised and passenger ships.*

**E.II.A-07 IMO ship Number**

A permanent number assigned to each ship for identification purposes. The number will remain unchanged upon transfer of the ship to other flag(s) and will be inserted in the ship's certificates. The IMO ship identification number is made of the three letters "IMO" followed by the seven-digit number assigned to all ships by Lloyd's Register Fairplay when constructed. This is a unique seven digit number that is assigned to propelled, sea-going merchant ships of 100 GT and above upon keel laying with the exception of the following:

- Vessels solely engaged in fishing
- Ships without mechanical means of propulsion
- Pleasure yachts
- Ships engaged on special service (e.g. lightships, SAR vessels)
- Hopper barges
- Hydrofoils, air cushion vehicles
- Floating docks and structures classified in a similar manner
- Ships of war and trooopships
- Wooden ships.

**E.II.A-08 Cruise ship**

A passenger ship intended to provide passengers with a full tourist experience. All passengers have cabins. Facilities for entertainment aboard are included.

*Ships operating normal ferry services are excluded, even if some passengers treat the service as a cruise. In addition, cargo carrying vessels able to carry a very limited number of passengers with their own cabins are also excluded. Ships intended solely for day excursions are also excluded.*

**E.II.A-09 Nationality of registration of Seagoing vessel (Flag state)**

Country and/or territory authorising the registry of a seagoing vessel.

*A seagoing vessel is subject to the maritime regulations in respect of manning scales, safety standards and consular representation abroad of its country and/or territory of registration. Some countries e.g. Norway and Denmark provide 'international' or 'open' registers where the requirements are different from those in the 'national' register.*

**E.II.A-10 Seagoing vessel under national flag**

Seagoing vessel, which is registered in the reporting country.

**E.II.A-11 Seagoing vessel under foreign flag**

Seagoing vessel, which is registered in a country other than the reporting country.

**E.II.A-12 Merchant fleet**

Number of merchant ships over 100 BT registered at a given date in a country.

*Changes in the fleet refer to changes in total or within a ship type, in the seagoing fleet of the reporting country, resulting from new construction, modification in type or capacity, transfers to or from a different flag state, scrapping, casualties, or transfer to or from the fluvial register. Vessels under repair are included.*

**E.II.A-13 Deadweight (DWT)**

The deadweight of a ship is the difference in tonnes between the displacement of a ship on summer load-line in water with a specific gravity of 1,025 and the total weight of the ship, i.e. the displacement in tonnes of a ship without cargo, fuel, lubricating oil, ballast water, fresh water and drinking water in the tanks, usable supplies as well as passengers, crew and their possessions.

**E.II.A-14 Gross tonnage (GT)**

Gross tonnage is a measure of the size of a ship determined in accordance with the provisions of the International Convention on Tonnage Measurement of Ships, 1969.

*Prior to the adoption of the International Convention, the Oslo Convention (1947) was in force, which produced substantially different figures for gross tonnage for some vessels. In some cases, the gross tonnage measure for a vessel is available only on the basis of this earlier convention.*

**E.II.A-15 Automatic Identification System**

An automatic identification system is a system to:

- Provide information - including the ship's identity, type, position, course, speed, navigational status and other safety related information - automatically to appropriately equipped shore stations, other ships and aircraft;
- Receive automatically such information from similarly fitted ships;
- Monitor and track ships;
- Exchange data with shore-based facilities.



## E.II.B CONTAINERS

### E.II.B-01 Loading unit

Container, swap body.

"Flats" (see E.II.B-09 below) used in maritime transport are included as a special type of container.

### E.II.B-02 Intermodal transport unit (ITU)

Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

### E.II.B-03 Container

Special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers. A more formal technical definition of a container is:

- Article of transport equipment which is:
  - a) Of a permanent character and accordingly strong enough to be suitable for repeated use
  - b) Specially designed to facilitate the carriage of goods, by one or more mode of transport without intermediate reloading
  - c) Fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another
  - d) So designed as to be easy to fill and empty
  - e) Stackable and
  - f) Having an internal volume of 1 m<sup>3</sup> or more

*Swap bodies are excluded.*

*Although without internal volume, and therefore not satisfying criterion (f) above, flats (see E.II.B-09 below) used in maritime transport should be considered to be a special type of container and therefore are included here.*

### E.II.B-04 Sizes of containers

The main sizes of containers are:

- a) 20 Foot ISO container (length of 20 feet and width of 8 feet)
- b) 40 Foot ISO container (length of 40 feet and width of 8 feet)
- c) ISO container over 20 feet and under 40 feet of length
- d) ISO container over 40 feet long
- e) Super high cube container (oversize container)
- f) Air container (container conforming to standards laid down for air transportation)

*Containers are normally 8 foot height but other heights also exist." High cube containers" are containers with a height of 9.5 foot." Super high cube containers" are containers exceeding the ISO dimensions. They include container lengths of 45 foot, 48 foot and 53 foot.*

*Containers sizes classified under a) to e) are referred to as large containers.*

**E.II.B-05 Tare Weight of container**

The tare weight of a container is included in the total weight of the containerised goods transported, also called the gross-gross weight of goods. The gross weight of containerised goods transported can be calculated from the gross-gross weight by deducting the tare weight of the container and vice versa. If information about the tare weight is missing then the tare weight may be estimated using the averages below.

*The tare weight of a container may be estimated as:*

- |   |             |
|---|-------------|
| a) 20 Foot ISO container                                  | 2.3 tonnes  |
| b) 40 Foot ISO container                                  | 3.7 tonnes  |
| c) ISO container over 20 feet and under 40 feet of length | 3.0 tonnes  |
| d) ISO container over 40 feet of length                   | 4.7 tonnes. |

**E.II.B-06 Types of containers**

The main types of containers, as defined by ISO Standards Handbook on Freight Containers are:

1. General purpose containers
2. Specific purpose containers
  - Closed ventilated container
  - Open top container
  - Platform based container open sided
  - Platform based container open sided with complete superstructure
  - Platform based container open sided with incomplete superstructure and fixed ends
  - Platform based container open sided with incomplete superstructure and folding ends
  - Platform (container)
3. Specific cargo containers
  - Thermal container
  - Insulated container
  - Refrigerated container - (expendable refrigerant)
  - Mechanically refrigerated container
  - Heated container
  - Refrigerated and heated container
  - Tank container
  - Dry bulk container
  - Named cargo container (such as automobile, livestock and others); and
  - Air mode container.

**E.II.B-07 TEU (Twenty-foot Equivalent Unit)**

A statistical unit based on an ISO container of 20 foot length (6.10 m) to provide a standardised measure of for counting containers of various capacities and for describing the capacity of container ships or terminals. One 20 Foot ISO container equals 1 TEU.

*One 40 Foot ISO container equals two 2 TEU.*

*One container with a length between 20 and 40 foot equals 1.50 TEU.*

*One container with a length of more than 40 foot equals 2.25 TEU.*

**E.II.B-08 Swap body**

A freight-carrying unit optimised to road vehicle dimensions and fitted with handling devices for transfer between modes, usually road/rail.

*Such units were not originally designed to be stacked when full or top-lifted. Many units now can be, although not to the same extent as containers. The main feature distinguishing them from containers is that they are optimised to road vehicle dimensions. Such unit would need UIC approval to be used on rail. Some swap bodies are equipped with folding legs on which the unit stands when not on the vehicle.*

**E.II.B-09 Flat**

A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings.

*This is an alternative term used for certain types of specific purpose containers - namely platform containers and platform-based containers with incomplete structures.*

**E.II.B-10 Pallet**

Raised platform, intended to facilitate the lifting and stacking of goods.

*Pallets are usually made of wood, and of standard dimensions:*

*1 000 mm x 1 200 mm (ISO) and 800 mm x 1 200 mm (CEN).*

**E.II.B-11 Ro-Ro unit**

Wheeled equipment for carrying goods, such as a lorry, trailer or semi-trailer, which can be driven or towed onto a vessel or train.

*Port or vessels' trailers are included in this definition.*

**E.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT****E.III-01 Transport for hire or reward**

Carriage, for remuneration, of persons or goods on behalf of third parties.

**E.III-02 Transport on own-account**

Transport, which is not for hire or reward.

*Such transport is the movement by an enterprise of its own cargo without any associated financial transaction.*

**E.III-03 Enterprise**

Institutional unit or smallest combination of institutional units that encloses and directly or indirectly controls all necessary functions to carry out its production activities.

*The requirements of an enterprise are that it has one ownership or control. It can, however, be heterogeneous with regard to its economic activity as well as to its location. Even those enterprises without salaried employees are taken into account. Only units that actually carry out an activity during the reference period should be included. "Dormant" units or those that have not as yet begun their activity are excluded.*

**E.III-04 Sea transport enterprise (Shipping firm)**

Enterprise carrying out in one or more places activities for the supply of sea transport services and whose main activities according to value added is sea transport.

*In terms of activity classifications the following classes are involved:*

*ISIC Rev.4: Class 501 - Sea and coastal water transport*

*NACE/Rev.2: Class 50.1 Sea and coastal passenger water transport*

*Class 50.2 Sea and coastal freight water transport.*

*Ship management enterprises which operate merchant ships on behalf of their owners or lease holders are included. Ports and other units providing supporting and auxiliary transport services are excluded. These fall within the scope of E.III-06 below.*

**E.III-05 Public sea transport enterprise**

Sea transport enterprise which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.

**E.III-06 Port enterprise**

An enterprise carrying out in one or more places the provision of port services and whose main activity according to value added is port services. Pleasure port enterprises are excluded.

*Port enterprises themselves other than pleasure port enterprises are included. In terms of activity classifications the following classes are involved:*

*ISIC Rev.4 : Class: 5222 - Service activities incidental to water transportation*

*NACE Rev 2: Class 52.22- Service activities incidental to water transportation.*

**E.III-07 Public port enterprise**

Port enterprise, which is principally owned (more than 50 per cent of the capital) by the State or public authorities and their enterprises.



### E.III-08 Classification society

An enterprise which sets standards of design and construction of seagoing vessels and the maintenance of those standards throughout the life of the vessel by survey to secure, for the benefit of the community, high technical standards of design, manufacture, construction, maintenance, operation, and performance, for the purpose of enhancing the safety of life and property at sea.

*In terms of activity classifications the following classes are involved:*

*ISIC Rev.4 Draft:* Class 5229 - Other transportation support activities

*NACE Rev 2:* Class 52.29-Other transportation support activities.

### E.III-09 Turnover

Total amount invoiced by an enterprise during the period under review. This total corresponds to market sales of services or goods supplied to third parties. Included in turnover is "other operating income" e.g. income from concessions, patents, trademarks and similar values. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the enterprise vis-à-vis its customers. It also includes all other charges to customers. Reductions in prices, rebates and discounts as well as the value of returned packing must be deducted, but not cash discounts.

*Turnover includes only ordinary activities and hence does not include sales of fixed assets. Operating subsidies received from public authorities, including the institutions of the European Union, are also excluded.*

### E.III-10 Employment

Employment is the number of persons employed, i.e. the total number of persons who work in the enterprise (inclusive of working proprietors, partners working regularly in the enterprise and unpaid family workers), as well as persons who work outside the enterprise who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the pay-roll, as well as seasonal workers, apprentices and home workers on the pay-roll.

The number of persons employed excludes manpower supplied to the enterprise by other enterprises, persons carrying out repair and maintenance work in the enquiry enterprise on behalf of other enterprises, as well as those on compulsory military service. On the other hand, persons who are at the disposal of an enterprise for commercial reasons on the basis of a long term contract (i.e. sales promotion personnel on passenger ferries) should be included as employees of the enterprise where they work rather than in the enterprise with which they have their employment contract.

*Unpaid family workers refer to persons who live with the proprietor of the enterprise and work regularly for the enterprise, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another enterprise as their principal occupation.*

*The number of persons employed corresponds to the number of jobs as defined in the European System of Accounts 1995 (ESA) and is measured as an annual average.*

### E.III-11 Employment category - sea transport enterprise staff

Employment for a sea transport enterprise is categorised as follows:

- Officers
- Ratings
- Cadets and other trainees
- Other vessel based staff including restaurant and entertainment staff
- Shore based staff engaged in management, sales, passenger and cargo handling etc.

**E.III-12 Employment category - port enterprise staff**

Employment for a port enterprise is categorised as follows:

- Port management and administration staff
- Pilots and other ship based staff
- Dock workers
- Technical and maintenance personnel
- Other.



## E.IV TRAFFIC

### E.IV-01 Sea service

Any movement of a seagoing vessel at sea.

*One port traffic (movements of seagoing vessels to offshore installations, or for dumping at sea, or traffic from the sea bed to ports) is included. Fluvio-maritime movements of seagoing vessels are included. Movements on inland waterways between seaports and inland waterway ports are excluded and are included in inland waterway traffic. Movements of seagoing vessels internally, between different basins or docks of the same port, are excluded.*

### E.IV-02 Scheduled sea service

A service provided by sea vessels scheduled and performed according to a published timetable, or so regular or frequent as to constitute a recognisably systematic series.

### E.IV-03 Unscheduled sea service

A sea service other than a scheduled sea service.

### E.IV-04 Sea journey

Sea traffic from a specified point of origin to a specified point of destination.

*A journey can be divided into a number of stages or sections. One port journeys from a sea port to an offshore installation or a location at sea are included. In the maritime context, sea journeys are also referred to as voyages or sea voyages.*

### E.IV-05 Sea stage

A sea stage is the movement of a vessel direct from one port to another without a port call at an intermediate port.

### E.IV-06 Cargo journey

A sea journey involving the movement of cargo, between a place of loading or embarkation and a port of unloading or disembarkation.

*A sea journey may involve calls at a number of ports between the specified point of origin and the specified point of destination and encompass a number of cargo journeys with the loading and unloading of cargo at a number of ports.*

### E.IV-07 Port-to-port distance

For statistical purposes, the port-to-port distance is the actual distance sailed

*An estimate of the actual distance can be provided.*

### E.IV-08 Vessel-kilometre

Unit of measurement representing the movement of a vessel over one kilometre.

*The distance taken into account is the distance actually travelled. Movements of unladen vessels are included.*

### E.IV-09 Port call by a merchant ship

A merchant ship makes a port call when it anchors or berths to load and/or unload cargo, to embark and/or disembark passengers or to facilitate excursions by passengers.

*Anchorage, without any cargo or passenger movements, and traversing the port are excluded.*

**E.IV-10 Bunker call**

A cargo and passenger ship makes a bunker call when it anchors or berths in a port to take on bunker oil or supplies.

**E.IV-11 Other calls**

Calls at a port by a cargo and passenger ship other than port calls or bunker calls.

**E.IV-12 Arrival of a merchant ship**

The arrival of any merchant ship making a port call in the territory of the reporting country.

**E.IV-13 Departure of a merchant ship**

The departure of any merchant ship after making a port call in the territory of the reporting country.

**E.IV-14 Merchant ship laid up**

A merchant ship is laid up when it is moored in port because of lack of work.

**E.IV-15 Port state control**

The inspection in port by the state in which the port is situated of merchant ships to monitor their seaworthiness.

**E.IV-16 Detention under port state control**

The detention in port under port state control of a merchant ship found to be unseaworthy.



## E.V TRANSPORT MEASUREMENT

### E.V-01 Sea transport

Any movement of goods and/or passengers using merchant ships on journeys, which are undertaken wholly or partly at sea.

*One port transport (movements of goods shipped to offshore installations, or for dumping at sea, or reclaimed from the sea bed and unloaded in ports) is included. While bunkers and stores supplied to vessels in port are excluded, bunker oil shipped to vessels offshore is included.*

*Fluvio-maritime movements of goods by merchant ships are included. Movements of goods on inland waterways vessels between seaports and inland waterway ports are excluded. (They are included in inland waterway transport). Movements of goods carried internally between different basins or docks of the same port are excluded.*

### E.V-02 Commercial sea transport

Sea transport undertaken for commercial purposes either for payment (i.e. hire and reward) or on the enterprise's own account as part of a wider economic activity.

### E.V-03 National sea transport

Sea transport between two ports of a national territory or one port sea transport within national territory.

*In the maritime context, national sea transport is also known as cabotage. National sea transport can be performed by a merchant ship registered in the reporting country or in another country.*

### E.V-04 International sea transport

Sea transport other than national sea transport.

*International one port transport is included.*

### E.V-05 Cross-trade sea transport

International sea transport between two countries performed by a merchant ship registered in a third country.

*A third country is a country other than the country of loading/embarkation or the country of unloading/disembarkation.*

### E.V-06 Short sea shipping

Movement of cargo by sea between ports situated within a relatively narrow geographical area.

*Included in such movements would be ferry and feeder traffic. For Europe, short sea shipping would consist of the movement of cargo by sea between ports situated in Europe as well as between ports in Europe and ports situated in non-European countries having a coastline on the enclosed seas bordering Europe.*

### E.V-07 Deep sea shipping

Transport of cargo by sea other than short sea shipping.

### E.V-08 Unitised transport

Unitised transport is the carriage of cargo in intermodal transport units such as containers or mobile (Ro-Ro) units.

*Transport in swap bodies is included.*

**E.V-09 Non-unitised transport**

Transport other than unitised transport.

*Such transport includes liquid and dry bulk transport, forest products and general cargo.*

**E.V-10 Tonne-kilometre**

Unit of measure representing the movement of one tonne of cargo in a merchant ship over one kilometre.

**E.V-11 Tonne-kilometre offered**

A tonne-kilometre is offered when one tonne of carrying capacity in a merchant ship is sailed over one kilometre. Tonne-kilometres offered are equal to the cargo carrying capacity of the vessel multiplied by the port-to-port distance for all journeys. Transport in barges is included.

**E.V-12 Tonne-kilometres performed**

Tonne-kilometres performed is calculated as the sum over all journeys of the product of the total number of tonnes of freight load carried and the port-to-port distance for each journey.

**E.V-13 Freight capacity utilisation**

Tonne-kilometres performed expressed as a percentage of tonne kilometres offered.

**E.V-14 Tonnes on board**

Tonnes of cargo on board a merchant ship on arrival at or departure from a port.

**E.V-15 TEU-kilometre**

Unit of measurement representing the movement of one TEU over one kilometre.

**E.V-16 TEU-kilometre offered**

A TEU-kilometre offered is the movement of one TEU of capacity in a container ship over one kilometre. TEU-kilometres offered are equal to the TEU carrying capacity of the vessel multiplied by the port-to-port distance for all journeys.

*The TEU carrying capacity will be the stated capacity recorded in the register of the classification society.*

**E.V-17 TEU-kilometres performed**

TEU-kilometres performed is calculated as the sum over all journeys of the product of the total number of TEUs carried and the port-to-port distance for each journey.

**E.V-18 TEU capacity utilisation**

TEU-kilometres performed expressed as a percentage of TEU kilometres offered.

**E.V-19 TEUs on board**

The TEUs on board a merchant ship on arrival at or departure from a port.

**E.V-20 Sea passenger**

Amy person who makes a sea journey on a merchant ship.

*Service staff assigned to merchant ships are not regarded as passengers. Non-fare paying crew members travelling but not assigned and infants in arms are excluded.*

**E.V-21 Cruise passenger**

A sea passenger making a sea journey on a cruise ship.

*Passengers on day excursions are excluded.*

**E.V-22 Sea passenger journey**

The movement of a passenger from the port at which the journey begins to the port at which it ends. For some passengers, notably cruise passengers, this can be the same port.

*The distance to be taken into consideration is the distance actually travelled by the passenger.*

**E.V-23 Passenger-kilometre**

Unit of measurement representing the movement of one passenger in a merchant ship over one kilometre.

**E.V-24 Passenger-kilometre offered**

A passenger-kilometre is offered when one unit of passenger capacity is sailed one kilometre.

*Passenger-kilometres offered are equal to the sum of the products obtained by multiplying the authorised passenger capacity of the vessel and the port-to-port distance for all journeys.*

*The passenger carrying capacity will be the stated capacity recorded in the register of the classification society.*

**E.V-25 Passengers on board**

The number of passengers on board a merchant ship on arrival at or departure from a port.

**E.V-26 Passenger-kilometres performed**

The sum of the products obtained by multiplying the number of sea passengers carried on each journey by the port-to-port distance.

**E.V-27 Passenger capacity utilisation**

Passenger-kilometres performed expressed as a percentage of passenger kilometres offered.

**E.V-28 Purpose of a sea passenger journey**

The reasons for undertaking a journey are:

- Work and education (Commuting)
- Business
- Holidays (vacation)
- Other (Shopping, leisure, family).

**E.V-29 Sea passenger embarked**

Passenger who boards a merchant ship to undertake a sea passenger journey.

*A transfer from one merchant ship to another is regarded as embarkation after disembarkation. Cruise passengers on a cruise passenger excursion are excluded.*

**E.V-30 Sea passenger disembarked**

A passenger disembarking from a merchant ship at the end of a sea passenger journey.

*A transfer from one merchant ship to another is regarded as disembarkation before re-embarkation. Cruise passengers on a cruise passenger excursion are excluded.*

**E.V-31 Cruise passenger excursion**

A short visit by a cruise passenger to a tourist attraction associated with a port while retaining a cabin on board.

**E.V-32 Sea passenger transport link**

Combination of the port of embarkation and the port of disembarkation of the passenger conveyed by sea whatever itinerary is followed.

*These ports are maritime ports (except for fluvio-maritime transport for which they may be inland waterway ports), coded with international classification systems such as UN-LOCODE (codification for ports and other places).*

*Those ports can be grouped according to their geographical location by using international classification systems such as NUTS (Nomenclature for Territorial Units for Statistics - Eurostat).*

*Where the port of embarkation and disembarkation are the same, no sea transport link is implied.*

**E.V-33 Port of embarkation**

The port in which a passenger started a journey.

*A transfer from one merchant ship to another is regarded as embarkation after disembarkation. Cruise passengers on a cruise passenger excursion are excluded.*

**E.V-34 Port of disembarkation**

The port in which a passenger ends a journey.

*A transfer from one merchant ship to another is regarded as disembarkation before re-embarkation. Cruise passengers on cruise passenger excursion are excluded.*

**E.V-35 Goods carried by sea**

Any goods conveyed by merchant ships.

*This includes all packaging and equipment such as containers, swap-bodies, pallets or road goods vehicles. Mail is included; goods carried on or in wagons, lorries, trailers, semi-trailers or barges are also included. Conversely, the following items are excluded: road passenger vehicles with drivers, returning empty commercial vehicles and trailers, bunkers and stores of vessels, fish carried in fishing vessels and fish-processing ships, goods carried internally between different basins or docks of the same port.*

**E.V-36 Gross-gross weight of goods**

The total weight of the goods carried, all packaging, and the tare weight of the transport unit (e.g. containers, swap bodies and pallets containing goods as well as road goods vehicles wagons or barges carried on the vessel).

**E.V-37 Gross weight of goods**

The total weight of goods carried, including packaging but excluding the tare weight of transport units (e.g. containers, swap bodies and pallets containing goods as well as road goods vehicles wagons or barges carried on the vessel).

**E.V-38 Tare weight**

The weight of a transport unit (e.g. containers, swap bodies and pallets containing goods as well as road goods vehicles wagons or barges carried on the vessel) before any cargo is loaded.



#### E.V-39 Types of cargo

Freight cargo can be classified in terms of both the design of the vessel itself and the handling equipment required at ports and on the vessel. The principal categories are

- Liquid bulk
- Dry bulk
- Containers
- Roll-on/Roll-off (self-propelled)
- Roll-on/Roll-off (non-self-propelled)
- Other general cargo.

#### E.V-40 Lo-Lo (Lift-on Lift-off)

Loading/unloading by the vessel's own derricks/cranes or by shore based cranes.



#### E.V-41 Container cargo

Container cargo consists of containers with or without freight, which are lifted on or off the vessels, which carry them by sea.

#### E.V-42 Ro-Ro (Roll-on Roll-off)

Loading/unloading through the vessel's doors/ramps by a wheeled means of conveyance.

*Loading or unloading live animals on the hoof is included.*



#### E.V-43 Ro-Ro Cargo

Ro-Ro cargo consists of goods, whether or not in containers, on ro-ro units, which are rolled on and off the vessels, which carry them, by sea.

#### E.V-44 Categories of goods carried by sea

The categories of goods carried by sea are those defined by the NST (Standard Goods Nomenclature for Transport Statistics - Eurostat) or CSTE (UNECE Commodity Classification for Transport Statistics in Europe) nomenclatures.

**E.V-45 Dangerous goods**

The classifications of dangerous goods are those defined by chapter VII of the International Convention for the Safety of Life at Sea (SOLAS, 1974), as amended and as detailed in the International Maritime Dangerous Goods (IMDG) code.

**E.V-46 Ship to ship transhipment**

The unloading of cargo from one merchant ship and its loading into another to complete a journey, even where the cargo may have dwell time ashore before its onward journey.

*Transhipment to other modes is excluded.*

**E.V-47 Goods loaded**

Goods placed on a merchant ship for transport by sea.

*Transhipment from one merchant ship to another is regarded as loading after unloading. Goods loaded include national goods, transhipment goods (national or foreign goods arriving in port by sea) and land transit goods (foreign goods arriving in port by road, rail, air or inland waterway).*

**E.V-48 Goods unloaded**

Goods taken off a merchant ship.

*Transhipment from one merchant ship to another is regarded as unloading before re-loading. Goods unloaded include national goods, transhipment goods (national or foreign goods leaving a port by sea) and land transit goods (foreign goods leaving a port by road, rail, air or inland waterway).*

**E.V-49 Goods sea transport link**

The combination of the port of loading and the port of unloading of the goods transported by sea whatever itinerary is followed.

*Those ports are maritime ports (except for fluvio-maritime transports for which it may be inland waterway ports), coded with international classification systems such as UN-LOCODE (codification for ports and other places).*

*Those ports can be grouped according to their geographical location by using international classification systems such as NUTS (Nomenclature for Territorial Units for Statistics - Eurostat).*

**E.V-50 Port of loading**

The port at which a consignment of goods was loaded onto the ship from which it is unloaded at the reporting port.

*Transhipments from one merchant ship to another are regarded as loading after unloading.*

**E.V-51 Port of unloading**

The port at which a consignment of goods, loaded onto a ship at the reporting port, is to be unloaded from the same ship.

*Transhipments from one merchant ship to another are regarded as unloading before re-loading.*



## E.VI ENERGY CONSUMPTION

### E.VI-01 Energy consumption by merchant ships

Final energy consumption by ships.

*This includes final energy consumption by unladen ships.*

### E.VI-01 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption (1 TOE = 0.041868 terajoule (T)).

*Conversion factors adopted by the International Energy Agency (IEA) are as follows:*

- Gas/diesel oil 1.035
- Heavy fuel oil 0.960.

### E.VI-01 Joule

Unit of measurement of energy consumption.

$1 \text{ terajoule} = 10^{12} \text{ J} = 2.78 \times 10^6 \text{ kWh}$

$1 \text{ terajoule} = 23.88459 \text{ TOE}$ .

### E.VI-04 Gas/diesel oil (distillate fuel oil)

Oils obtained from the lowest fraction from atmospheric distillation of crude oil.

*Gas/diesel oils include heavy gas oils obtained by vacuum re-distillation of the residual from atmospheric distillation. Gas/diesel oil distils between 200°C and 380°C, with less than 65 per cent in volume at 250°C, including losses, and 80 per cent or more at 350°C. Heavy oils obtained by blending are grouped together with gas oils, provided that their kinematic viscosity does not exceed 25 cSt at 40°C.*

*Calorific value: 43.3 TJ/l 000 t.*

### E.VI-05 Heavy fuel oil (residual)

Heavy oil that makes up the distillation residue.

*This comprises all residual fuel oils (including those obtained by blending). The viscosity of heavy fuel oil is above 25 cSt at 40°C. The flashpoint is always above 50°C and their density is higher than 0.*



F

Air Transport







## F.I INFRASTRUCTURE

### F.I-01 Airport

A defined area of land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft and open for commercial air transport operations.

*Most airports have a 4-letter ICAO code as listed in the ICAO Document 7910. Most but not all also have codes allocated by IATA.*

### F.I-02 International Airport

Any airport designated by the State in the territory of which it is situated as an airport of entry and departure for international air traffic, where the formalities incidental to customs, immigration, public health, agricultural quarantine and similar procedures are carried out, whether such facilities are provided on a full time or part time basis.

### F.I-03 Domestic Airport

Any airport not designated to handle international traffic

### F.I-04 Airport Terminal

A self contained facility for handling passengers and/or freight

- Passenger terminal

An airport terminal with facilities for the handling of passengers, including passenger check-in, baggage handling, security, immigration passenger boarding and disembarkation.

- Freight terminal.

An airport terminal designed solely to handle freight shipments, including freight acceptance and release, secure storage, security and documentation.

### F.I-05 Airport runways

A defined rectangular area on an airport prepared for the landing and take-off of aircraft with the following characteristics:

- Take-off run available

The length of runway declared available and suitable for the ground run of an aircraft taking off.

- Landing distance available.

The length of runway which is declared available and suitable for the ground run of an aircraft landing.



**F.I-06****Airport taxiways**

A defined path on an airport established for the taxiing of aircraft and intended to provide a link between one part of the airport and another.

**F.I-07****Check-in Facilities**

- Conventional

A conventional check-in facility where airline staff handle ticket processing, luggage labelling, including fast bag drops, and issue of boarding cards directly.

- Self service check-in kiosks.

A kiosk providing check-in facilities and offering automatic ticket processing, boarding cards and, in some cases, luggage label printing.

**F.I-08****Passenger gates**

An area of a passenger terminal where passengers gather prior to boarding their Aircraft.

- a) With finger bridges (jetbridges or jetways)

A gate with a finger bridge connecting to the aircraft to allow boarding without descending to ground level and using steps to board.

- b) Other.

Gates other than those with finger bridges.

**F.I-09****Airport car parking**

Parking facilities provided at the airport.

- Short stay

Parking where the maximum permitted duration of stay is less than 24 hours.

- Medium and long stay (long term).

Parking where the maximum permitted duration of stay is 24 hours or more.

For remote parking facilities, only those served by airport buses should be included.

**F.I-10****Intermodal freight facilities**

A freight terminal within the airport with connections to modes other than road on its landside

**F.I-11 Connections to other modes of transport**

Facilities provided within the airport for connection to the following modes of surface transport

- a) High speed rail
  - Access to high speed rail services.
- b) Main line rail
  - Access to main line rail services.
- c) Metro
  - Access to city metro and underground services.
- d) Inter urban bus services
  - Access to express and inter urban coach services
- e) City bus services .
  - Access to local bus services.

**F.II TRANSPORT EQUIPMENT (AIRCRAFT)****F.II-01 Aircraft**

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of air against the earth's surface

*Dirigibles and surface effect vehicles such as hovercraft are excluded. ICAO provides aircraft type designators in ICAO Document 8643. In addition, ICAO and the Commercial Aviation Safety team (CAST) have jointly developed a new taxonomy to correctly identify aircraft. Details are available on the following website: <http://www.intlaviationstandards.org/>.*

**F.II-02 Aviation fleet**

Aircraft registered at a given date in a country

**F.II-03 Operating fleet**

Operating Fleet includes all aircraft in service for commercial purposes (including all aircraft that are temporarily unserviceable due to major accidents, conversions, government action such as grounding by government regulatory agencies).

*Aircraft used solely for training and communications and private flying are not included in the operating fleet.*

**F.II-04 Aircraft by configuration****a) Passenger aircraft**

An aircraft configured for the transport of passengers and their baggage. Any freight, including mail, is generally carried in cargo holds in the belly of the aircraft.

**b) Cargo aircraft**

An aircraft configured solely for the carriage of freight and/or mail.

Persons accompanying certain kinds of cargo, such as livestock, may also be carried.

**c) Combi aircraft**

A passenger aircraft with enhanced capabilities for the carriage of freight on the passenger deck.

**d) Quick change aircraft**

An aircraft designed to allow a quick change of configuration from passenger to cargo and vice versa.

**e) Other**

An aircraft not used for commercial air transport.

**F.II-05 Aircraft by noise characteristics**

- a) Non-noise certificated aircraft

Aircraft not certificated against international noise requirements

- b) Chapter II aircraft

Aircraft meeting the ICAO Chicago Convention Annex 16 Chapter II specifications

- c) Chapter III aircraft

Aircraft meeting the ICAO Chicago Convention Annex 16 Chapter III specifications.

- d) Chapter IV aircraft.

Aircraft meeting the ICAO Chicago Convention Annex 16 Chapter IV specifications.

**F.II-06 Aircraft age**

Years since first registration of an aircraft.

**F.III ENTERPRISES, ECONOMIC PERFORMANCE AND EMPLOYMENT****F.III-01 Enterprise**

Institutional unit of smallest combination of institutional units that encloses and directly or indirectly controls all the necessary functions to carry out its production activities.

*The requirements of an enterprise are that it has one ownership or control. It can, however, be heterogeneous with regard to its economic activity as well as to its location.*

**F.III-02 Airline (Commercial air transport operator)**

An aviation enterprise operating aircraft for commercial purposes which (i) performs scheduled or non-scheduled air transport services, or both, which are available to the public for carriage of passengers, mail, and/or cargo and (ii) is certified for such purposes by the civil aviation authority of the state in which it is established.

*ICAO provides a 3-letter air transport operator code as listed in ICAO Document 8585 and is required for all airlines operating international routes. A two-character airline designator is assigned by IATA in accordance with the provisions of IATA Resolution 762. The two-character airline designators are used for reservations, schedules, time tables, telecommunications, ticketing, cargo documentation, legal, tariffs, and/or other commercial/traffic purposes. In terms of activity classifications the following classes are involved:*

ISIC Rev 4 Draft: Division 51 Air transport

NACE Rev 2: Division 51 Air transport.

**F.III-03 Airport operator**

An air transport undertaking operating a commercial airport.

*In terms of activity classifications the following classes are involved:*

ISIC Rev 4 Draft: Class 5223 Service activities incidental to air transport

NACE Rev 2: Class 52.23 Service activities incidental to air transport.

**F.III-04 Air traffic control provider**

An air transport undertaking providing air traffic control services

*In terms of activity classifications the following classes are involved:*

ISIC Rev 4 Draft: Class 5223 Service activities incidental to air transport

NACE Rev 2: Class 52.23 Service activities incidental to air transport.

**F.III-05 Airport services provider**

An undertaking providing airport services such as aircraft ground handling, fuelling, maintenance and security, passenger services such as check in, baggage handling, cargo handling and other services.

*In terms of activity classifications the following classes are involved:*

ISIC Rev 4 Draft: Class 5223 Service activities incidental to air transport

Class 5224 Cargo handling

NACE Rev 2 52.23: Service activities incidental to air transport incidental to air transport

Class 52.24 Cargo handling

**F.III-06 Turnover**

Total amount invoiced by the air transport enterprise during the period under review. This total corresponds to market sales of services or goods supplied to third parties. Included in turnover is "other operating income" e.g. income from concessions, franchise arrangements, patents, trademarks and similar values. Turnover includes all duties and taxes on the goods or services invoiced by the enterprise with the exception of VAT invoiced by the enterprise vis-à-vis its customers. It also includes all other charges to customers. Reductions in prices, rebates and discounts must be deducted, but not cash discounts.

*Turnover includes only ordinary activities and hence does not include sales of fixed assets. Operating subsidies received from public authorities are also excluded.*

**F.III-07 Maintenance costs – airports**

Expenditure necessary to sustain airport operations by maintaining the fixed infrastructure and essential equipment.

*Examples are runway maintenance, upkeep of baggage handling equipment and freight handling equipment.*

**F.III-08 Maintenance costs – aircraft**

Expenditure necessary to maintain aircraft and their engines in an airworthy condition.

*This includes routine maintenance of the airframe and engines, whether or not this is conducted in-house or subcontracted.*

**F.III-09 Employment**

Employment is the number of persons employed, i.e. the total number of persons who work in the enterprise (inclusive of working proprietors, partners working regularly in the enterprise and unpaid family workers), as well as persons who work outside the enterprise who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the pay-roll, as well as seasonal workers, apprentices and home workers on the pay-roll.

The number of persons employed excludes manpower supplied to the enterprise by other enterprises, persons carrying out repair and maintenance work in the enquiry enterprise on behalf of other enterprises, as well as those on compulsory military service. On the other hand, persons who are at the disposal of an enterprise for commercial reasons on the basis of a long term contract (i.e. demonstrators in department stores) should be included as employees of the enterprise where they work rather than in the enterprise with which they have their employment contract.

*The number of persons employed corresponds to the annual average number of persons employed.*

**F.III-10 Types of employment****a) General administration**

Includes central and regional management staff (e.g. finance, legal, personnel etc.) and boards of directors.

The management staff of specialist departments (operations and traffic, aircraft, air traffic control, runway and terminal construction and maintenance, emergency services) are excluded but are taken into account in the statistics specific to each of these services.

**b) Operations and traffic**

Cabin and ground crews (excluding flight deck staff) and associated central and regional offices. Includes tourism, advertising and terminal operations.

**c) Aircraft**

Flight deck staff, maintenance and inspection staff and associated central and regional offices.

**d) Airports**

Air traffic control staff, terminals, runway and other airport facilities construction, maintenance and supervision staff, ground handling staff, emergency services staff.

**e) Other operations**

Passenger and freight services, freight shipment services etc.



## F.IV TRAFFIC

### **F.IV-01 Aircraft movement**

An aircraft take-off or landing at an airport.

*For airport traffic purposes one arrival and one departure is counted as two movements. Included are all commercial aircraft movements and non-commercial general aviation operations. Excluded are State flights, touch and goes, overshoots and unsuccessful approaches.*

### **F.IV-02 Commercial aircraft movement**

An aircraft movement performed for remuneration or for hire.

*Includes commercial air service movements and commercial general aviation operations.*

### **F.IV-03 Aircraft departure**

A take-off of an aircraft.

### **F.IV-04 Aircraft arrival**

An aircraft landing.

### **F.IV-05 Revenue stop**

A traffic stop for purpose of taking on and/or taking off revenue load.

### **F.IV-06 Non-revenue stop**

A stop other than a revenue stop.

*Such stops include stops of positioning flights, state flights, training flights and technical stops.*

### **F.IV-07 Diversion**

An aircraft landing at an airport other than the one in the aircraft's flight plan because of operational or technical difficulties either on the aircraft or at the destination airport.

*Diversions may be caused by passenger misbehaviour, aircraft technical problems, bad weather conditions, accidents or other emergencies at the planned destination airport.*

### **F.IV-08 Airport pair**

An airport pair is defined as two airports between which travel is authorised by a passenger ticket or part of a ticket, or between which freight and mail shipments are made in accordance with a shipment document or part of it (air waybill or mail delivery bill).

### **F.IV-09 Airport-to-airport distance**

For statistical purposes, airport-to-airport distance means the airport-to-airport great circle distance in kilometres.

*The measurement is based on airport co-ordinates and a great circle calculation formula.*

### **F.IV-10 City pair - On flight origin/destination (OFOD)**

Two cities between which travel is authorized by a passenger ticket or part of a ticket or between which freight and mail shipments are made in accordance with a shipment document or a part of it (air waybill or mail delivery bill).

*In common usage, city pair is sometimes used interchangeably with airport pair.*

**F.IV-11 Flight stage (FS)**

The operation of an aircraft from take-off to its next landing.

*Technical stops are not included.*

**F.IV-12 Domestic flight stage**

Any flight stage flown between points within the domestic boundaries of a State.

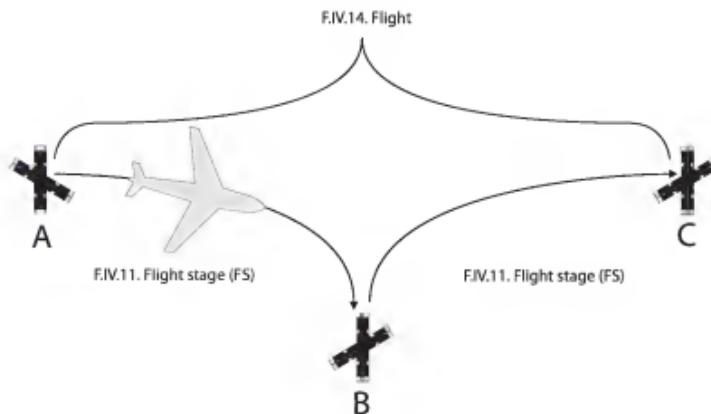
*Flight stages between a State and territories belonging to it, as well as any flight stages between such territories should be classified as domestic.*

**F.IV-13 International flight stage**

A flight stage where the take off is in one country and the next landing is in another country.

**F.IV-14 Flight**

The operation of an aircraft on one or more flight stages, using a single flight number, assigned by the airline.

**F.IV-15 Domestic flight**

A flight having exclusively domestic flight stages, all using the same flight number.

**F.IV-16 International flight**

A flight having one or more international flight stages, where all flight stages use the same flight number.

**F.IV-17 Commercial air flight**

An air transport flight performed for the public transport of passengers and/or freight and mail, for remuneration and for hire.

**F.IV-18 Commercial air service**

An air transport flight or series of flights for the public transport of passengers and/or freight and mail, for remuneration or for hire.

*The air service may be either scheduled or non-scheduled.*

**F.IV-19 Scheduled air service**

A commercial air service operated according to a published timetable, or with such a regular frequency that it constitutes an easily recognisable systematic series of flights.

*Includes extra section flights occasioned by overflow traffic from scheduled flights.*

**F.IV-20 Non-scheduled air service**

A commercial air service other than scheduled air service.

**F.IV-21 Passenger air service**

Scheduled or non-scheduled air service performed by aircraft carrying one or more revenue passengers and any flights listed in published timetables as open to passengers.

*Includes flights carrying both revenue passengers and revenue freight and mail.*

**F.IV-22 All-freight and mail air service**

Scheduled or non-scheduled air service performed by aircraft carrying revenue loads other than revenue passengers, i.e. freight and mail.

*Excludes flights carrying one or more revenue passengers and flights listed in published timetables as open to passengers. Air freight and air mail combined are sometimes referred to as air cargo.*

**F.IV-23 General aviation operations – commercial**

All commercial civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire. The main categories of commercial general aviation are as follows:

- a) Air taxi
- b) Photographic
- c) Sightseeing trips
- d) Advertising
- e) Agricultural/crop spraying
- f) Medical/air ambulance trips
- g) Other commercial.

**F.IV-24 General aviation operations – non-commercial**

All non-commercial civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire. The main categories of non-commercial general aviation are as follows:

- a) State Flight
  - Any flight performed by aircraft for military, customs, police or other law enforcement services of a State.
  - Any flight declared as a "State flight" by State authorities.
- b) Instructional flying
- c) Private flying
- d) Business flying
- e) Parachute and glider launch flights
- f) Technical stops
- g) Test flight
  - A non-commercial flight carried out for the purpose of testing the aircraft prior to placing it in operational service
- h) Positioning flight
  - A non-commercial flight carried out to position an aircraft for a scheduled or non-scheduled flight or service.
- i) Other non-commercial.

**F.IV-25 Flight number (aircraft)**

A flight number is the primary published flight number assigned by the air transport operator to the flight. Passengers using a flight by an aircraft may be travelling under a range of different flight numbers. Only the active flight number for the flight is in question here.

**F.IV-26 Code sharing**

The use of one operator's flight number for services/flights provided by other operators.

*For statistical purposes, the traffic is assigned to the operating carrier, the flight number for which is used by air traffic control.*

**F.IV-27 Block-to-block time**

The total time measured in hours and minutes measured from the aircraft's initial move from its departure point until its final stop at its arrival point.

**F.IV-28 Aircraft hours**

An aircraft hour is said to be performed when an aircraft operates for one hour. Aircraft hours are measured on the basis of block-to-block time.

**F.IV-29 Average daily aircraft utilisation - revenue hours**

Total revenue hours (scheduled plus charter) flown by aircraft type (block to block) during a period divided by the related number of aircraft days available. "Aircraft days available" shall be the sum of the number of days each aircraft is available for use during the period in question. The following days should be excluded from the days available:

- a) Days between the date of purchase and the date actually placed in service
- b) Days after its last revenue flight prior to disposal
- c) Days out of service due to major accidents or conversion
- d) Days when an aircraft is in the possession of others or not available due to government action such as grounding by government regulatory agencies.

*All other days must be considered as "days available", including days required for maintenance or overhaul.*

**F.IV-30 Aircraft kilometres performed**

Aircraft kilometres equal the sum of the products obtained by multiplying the number of flights performed on each flight stage by the airport-to-airport distance.

**F.IV-31 Passenger seats available**

The total number of passenger seats available for sale on an aircraft operating a flight stage between a pair of airports.

Includes seats which are already sold on a flight stage i.e. including those occupied by direct transit passengers.

*Excludes seats not actually available for the carriage of passengers because of maximum gross weight limitations.*

**F.IV-32 Seat-kilometre offered**

Unit of measurement representing the movement of one seat available in a passenger aircraft when performing the services for which it is primarily intended over one kilometre.

*The distance to be considered is that actually travelled. Shunting and other similar movements are excluded.*

**F.IV-33 Tonne-kilometre offered**

Unit of measurement representing the movement of one tonne of payload available in an aircraft when performing services for which it is primarily intended over one kilometre.

*The distance to be considered is that actually travelled.*

**F.V TRANSPORT MEASUREMENT****F.V-01 Air transport**

Any movement of goods and/or passengers on an aircraft movement.

**F.V-02 Commercial air transport**

Any movement of goods and/or passengers on a commercial aircraft movement.

**F.V-03 National air transport**

Air transport on a domestic flight.

**F.V-04 International air transport**

Air transport on an international flight.

**F.V-05 On flight origin and destination (OFOD)**

Traffic on a commercial air service identified by a unique flight number subdivided by airport pairs in accordance with point of embarkation and point of disembarkation on that flight.

*For passengers, freight or mail, where the airport of embarkation is not known, the aircraft origin should be deemed to be the point of embarkation; similarly if the airport of disembarkation is not known, the aircraft destination should be deemed to be the point of disembarkation.*

**F.V-06 Air Passenger**

Any person, excluding on-duty members of the flight and cabin crews, who makes a journey by air.

*Infants in arms are included.*

**F.V-07 Revenue air passenger**

A commercial passenger for whose transportation an air carrier receives commercial remuneration.

*This definition includes, for example, (i) passengers travelling under publicly available promotional offers (for example "two-for-one") or loyalty programmes (for redemption of frequent flier points); (ii) passengers travelling as compensation for denied boarding; (iii) passengers travelling under corporate discounts; (iv) passengers travelling under preferential fares (government, seamen, military, youth student etc.);*

*This definition excludes, for example, (i) persons travelling free; (ii) persons travelling at a fare or discount available only to employees of air carriers or their agents or only for the business of the carriers; (iii) infants who do not occupy a seat.*

**F.V-08 Non-revenue air passenger**

Passengers other than revenue passengers.

**F.V-09 Air passengers carried**

All passengers on a particular flight (with one flight number) counted once only and not repeatedly on each individual stage of that flight.

*All revenue and non revenue passengers whose journey begins or terminates at the reporting airport and transfer passengers joining or leaving the flight at the reporting airport. Excludes direct transit passengers.*

**F.V-10 Terminating passengers**

Passengers starting or ending their trip at the designated airport.

**F.V-11 Direct transit passengers**

Passengers who, after a short stop, continue their journey on the same aircraft on a flight having the same flight number as the flight on which they arrive. Passengers who change aircraft because of technical problems but continue on a flight with the same flight number are also counted as direct transit passengers.

*On some flights with intermediate stops, the flight number changes at an airport to designate the change between an inbound and outbound flight. Where passengers for an intermediate destination continue their journey on the same aircraft in such circumstances, they should be counted as direct transit passengers.*

**F.V-12 Transfer or indirect transit passengers**

Passengers arriving and departing on a different aircraft within 24 hours, or on the same aircraft bearing different flight numbers. They are counted twice: once upon arrival and once on departure.

*On some flights with intermediate stops, the flight number changes at an airport to designate the change between an inbound and outbound flight. Where passengers for an intermediate destination continue their journey on the same aircraft, they should not be counted as transfer or indirect transit passengers at the airport where the flight number is changed.*

**F.V-13 Terminal passengers**

Total of terminating and transfer passengers.

**F.V-14 Air passengers on board**

All passengers on board of the aircraft upon landing at the reporting airport or at taking off from the reporting airport.

*All revenue and non revenue passengers on board an aircraft during a flight stage. Includes direct transit passengers.*

**F.V-15 Passenger-kilometre**

A passenger kilometre is performed when a passenger is carried for one kilometre.

**F.V-16 Passenger load factor**

Passenger-kilometres expressed as a percentage of available seat kilometres.

**F.V-17 Passenger-kilometres flown by flight stage**

The sum of the products obtained by multiplying the number of passengers carried on each flight stage by the airport-to-airport distance.

**F.V-18 Passenger-kilometres flown by on-flight origin/ destination airports**

The product of multiplying the number of passengers flown between two airports as initial origin and final destination by the airport-to-airport distance.

**F.V-19 Passenger tonne-kilometres performed**

The result obtained by multiplying the passenger kilometres flown by the weight of each of the passengers including both free and excess baggage.

*Each air transport operator can use its own internal passenger weights or the standard 100kgs (baggage included).*

**F.V-20 Baggage**

Personal property of passengers and crew loaded or carried on board an aircraft by agreement with the operator.

**F.V-21 Freight**

Any property carried on an aircraft other than mail, stores and baggage.

*For statistical purposes, freight includes express freight and parcels and diplomatic bags but not passenger baggage. All trucking operations using an air waybill should be excluded.*

**F.V-22 Gross-Gross Weight of goods**

The total weight of the goods carried, all packaging, and the tare weight of the transport unit (e.g. air container).

**F.V-23 Gross Weight of goods**

The total weight of the goods carried, including packaging but excluding the tare weight of transport units (e.g. air container).

**F.V-24 Tare Weight**

The weight of a transport unit ((e.g. air container)) before any cargo is loaded.

**F.V-25 Freight loaded or unloaded**

Any freight loaded onto or unloaded from an aircraft.

*Direct transit freight is excluded.*

**F.V-26 Freight on board**

All freight on board an aircraft upon landing at an airport and at take off from an airport.

*Direct transit freight is included and it is counted at both landing and take off.*

**F.V-27 Freight tonne-kilometres performed by flight stage**

A Tonne-kilometre is a metric tonne of freight revenue load carried one kilometre. Tonne-kilometres performed is obtained by multiplying the total number of tonnes of freight revenue load carried on the flight stage by the airport-to-airport distance.

**F.V-28 Freight tonne-kilometres performed by on-flight origin/ destination airports**

A Tonne-kilometre is a metric tonne of freight revenue load carried one kilometre. Tonne-kilometres performed is obtained by multiplying the total number of tonnes of freight revenue load carried between two airports as initial origin and final destination by airport-to-airport distance.

**F.V-29 Mail**

Dispatches of correspondence and other objects carried on an aircraft, which have been dispatched by and intended for delivery to postal administrations.

*Express freight and express parcel shipments are excluded.*

**F.V-30 Mail loaded and unloaded**

Any mail loaded onto or unloaded from an aircraft.

*Direct transit mail is excluded.*

**F.V-31 Mail on board**

All mail on board during each flight stage, including mail loaded and direct transit mail.

**F.V-32 Diplomatic bag**

A mail pouch used by governments to send official letters and dispatches.

**F.V-33 Mail tonne-kilometres performed by flight stage**

A Tonne-kilometre is a metric tonne of freight revenue load carried one kilometre. Tonne-kilometres performed is obtained by multiplying the total number of tonnes of mail revenue load carried by the airport-to-airport distance.

**F.V-34 Mail tonne-kilometres performed by on-flight origin/ destination airports**

A Tonne-kilometre is a metric tonne of freight revenue load carried one kilometre. Tonne-kilometres performed is obtained by multiplying the total number of tonnes of mail revenue load carried between two airports as initial origin and final destination by airport-to-airport distance.

**F.V-35 Total freight/mail**

The sum of the total freight and mail, both loaded and unloaded, at the reporting airport. All trucking operations using an air waybill should be excluded.

Freight and mail together are sometimes referred to as cargo.

**F.V-36 Categories of goods carried by air**

Goods in transport may be classified according to type.

*Examples of classification schemes are NST 2007 (Standard Goods Nomenclature for Transport Statistics) that replaces the CSTE nomenclature (Commodity Classification for Transport Statistics in Europe - UNECE) and the NST/R nomenclature (Standard Goods Nomenclature for Transport Statistics/revised - Eurostat).*

**F.V-37 Dangerous goods**

The classes of dangerous goods carried by Air are those defined by the fifteenth revised edition of the UN Recommendations on the Transport of Dangerous Goods, United Nations, Geneva 2007.

- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable Liquids
- Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases
- Class 5: Oxidizing substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive material
- Class 8: Corrosive substances
- Class 9: Miscellaneous dangerous substances and articles.

**F.V-38 Payload carried**

The revenue load of passengers, baggage, freight and mail carried in the aircraft as measured in metric tonnes.

**F.V-39 Revenue tonne-kilometres performed**

A tonne-kilometre is a metric tonne of revenue load carried one kilometre. Tonne-kilometres performed equals the sum of the products obtained by multiplying the total number of tonnes of each category of revenue load carried by the airport-to-airport distance.

**F.V-40 Weight load factor**

Total revenue tonne-kilometres performed expressed as a percentage of available tonne-kilometres.

## F.VI ENERGY CONSUMPTION

### F.VI-01 Energy consumption by air transport

Final energy consumed by aircraft for propulsion, power and heating.

### F.VI-02 Tonne of oil equivalent (TOE)

Unit of measurement of energy consumption: 1 TOE = 0.041868 TJ.

The conversion factor adopted by the International Energy Agency (IEA) for kerosene is the following:

- Kerosene 1.045.

### F.VI-03 Joule

Unit of measurement of energy consumption:

1 terajoule =  $10^{12}$  J =  $2.78 \times 10^5$  kWh,

1 terajoule = 23.88459 TOE.



## F.VII ACCIDENTS

### F.VII-01 Accident

An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which one of the following applies:

- a) A person is fatally or seriously injured.

Where this is as a result of being in the aircraft, or direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or direct exposure to jet blast, except when the injuries are from natural causes, self inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.

- b) The aircraft sustains damage or structural failure.

Where this adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage. When the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin.

- c) The aircraft is missing or is completely inaccessible.

*An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.*

### F.VII-02 Incident

An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

### F.VII-03 Serious incident

An incident involving circumstances indicating that an accident nearly occurred.

*The difference between an accident and a serious incident lies only in the result. Examples of serious incidents can be found in the ICAO Accident/Incident Reporting Manual.*

### F.VII-04 Fatal injury

An injury resulting in death within thirty days of the date of the accident is classified as a fatal injury.

### F.VII-05 Non-fatal injury

An injury, other than a fatal injury, which is sustained by a person in an accident.

### F.VII-06 Serious injury

A non-fatal injury which is sustained by a person in an accident and which:

- a) Requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) Results in a fracture of any bone (except simple fractures of fingers, toes, or nose); or
- c) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) Involves injury to any internal organ; or
- e) Involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) Involves verified exposure to infectious substances or injurious radiation.

**F.VII-07 Slight injury**

A non-fatal injury, other than a serious injury, which is sustained by a person in an accident.

**F.VII-08 State of occurrence**

The State in the national territory of which an accident or incident occurs.

**F.VII-09 State of the operator**

The State in which the operator's principal place of business is located or, if there is no such place of business, the operators permanent residence.

**F.VII-10 State of registry**

The State on whose register the aircraft is entered.

**F.VII-11 Accident on national territory**

An accident on the national territory of a state.

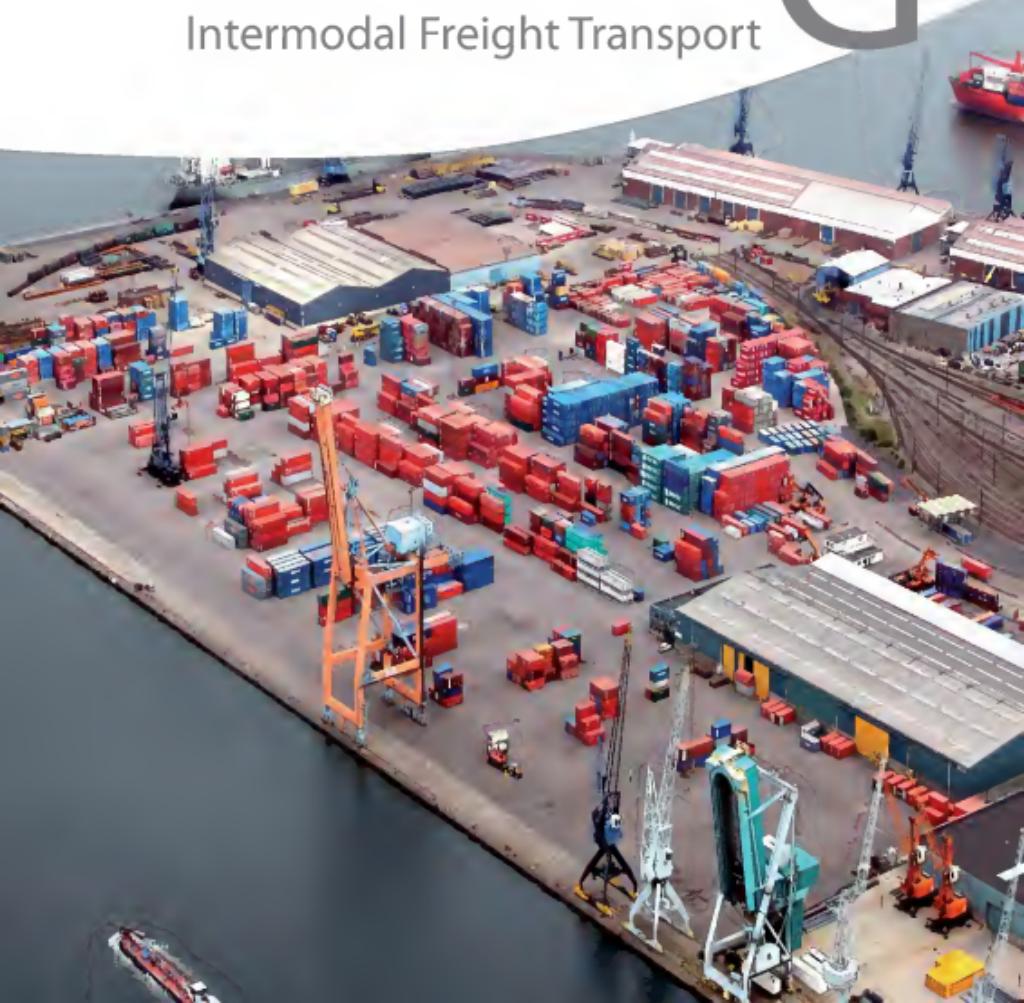
**F.VII-12 An accident on a nationally registered aircraft**

An accident involving an aircraft on the national aircraft register of a state.



# G

Intermodal Freight Transport





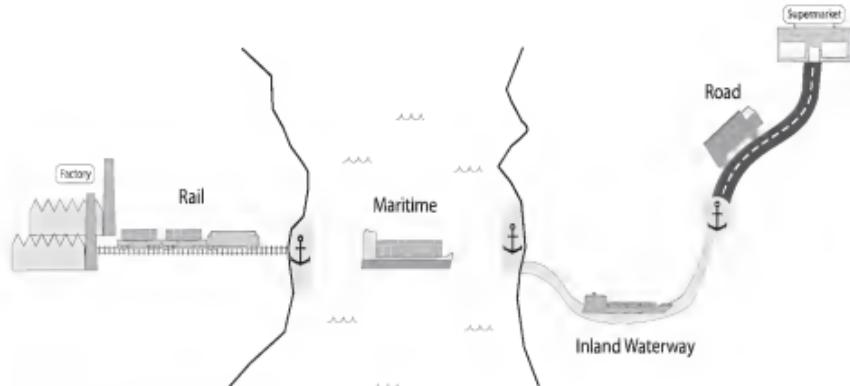
## G.I INTRODUCTION

### G.I-01 Intermodal freight transport

Multimodal transport of goods, in one and the same intermodal transport unit by successive modes of transport without handling of the goods themselves when changing modes.

*The intermodal transport unit can be a container, swap body or a road or rail vehicle or a vessel.*

*The return movement of empty containers/swap bodies and empty goods road vehicles/trailers are not themselves part of intermodal transport since no goods are being moved. Such movements are associated with intermodal transport and it is desirable that data on empty movements be collected together with data on intermodal transport.*



### G.I-02 Multimodal freight transport

Transport of goods by at least two different modes of transport.

*Intermodal transport is a particular type of multimodal transport.*

*International multimodal transport is often based on a contract regulating the full multimodal transport.*

### G.I-03 Combined freight transport

Intermodal transport of goods where the major part of the journey is by rail, inland waterway or sea and any initial and/or final leg carried out by road is as short as possible.

*According to EU Directive 92/106/EC the road distance (measured as the crow flies) should be less than 100 km for road-rail transport and 150 km for road-inland waterway or sea.*

### G.I-04 Simultaneous use of two means of transport (Active mode)/(Passive mode)

Intermodal transport of goods using two modes of transport simultaneously, where one (passive) means of transport is carried on another (active) means of transport which provides traction and consumes energy, e.g. Rail/road transport, sea/road transport and sea/rail transport.

*Piggyback transport is a synonym for rail/road transport.*

**G.I-05 Piggyback transport**

Transport of road vehicles by rail.

*The term was originally for transport of semi-trailers by rail but is also now applied to the transport of road vehicles in general.*

**G.I-06 Rolling road**

Transport of complete road vehicles, using roll-on roll-off techniques, on trains normally comprising low-floor wagons throughout.

*Transport of lorries via Eurotunnel is an example of a rolling road*

**G.I-07 Transport of driver accompanied goods road motor vehicle**

Transport of a complete goods road motor vehicle, accompanied by the driver, by another mode of transport (for example by sea or rail).

**G.I-08 Transport of road goods road motor vehicle, unaccompanied by the driver**

Transport of a goods road motor vehicle or a trailer, by another mode of transport (for example by sea or rail), not accompanied by a driver.

**G.I-09 Mode of transport**

Method of transport used for the carriage of goods and passengers.

*For statistical reporting, the following classification of methods of transport should be used*

- a) Unknown mode of transport
- b) Rail
- c) Road
- d) Inland waterways
- e) Maritime
- f) Pipeline
- g) Air.

*The classification may apply only to the active mode of transport, or to both the active and the passive mode. In the latter case a two digit code might be used, the first digit indicating the active mode and the second digit the passive mode.*

**G.I-10 Transport chain**

Sequence of transport modes used to move the goods from their origin to their destination. Along the chain one or more transhipments take place.

*The goods may not necessarily stay in the same loading unit along the full transport chain. Stuffing and stripping of an intermodal transport unit may take place during the journey.*

**G.I-11****Intermodal transport terminal**

Place equipped for transhipment and storage of intermodal transport units (ITUs) between modes.

*The "Hub and Spoke" concept relates to collection through a central point (the hub) and distribution in various directions (the spokes). The hub is a central point for the collection, sorting, transhipment and distribution of goods for a particular region.*





## G.II EQUIPMENT

### G.II-01 Loading unit

Container, swap body.

"Flats" (see G.II-09 below used in maritime transport) are included as a special type of container.

### G.II-02 Intermodal transport unit (ITU)

Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

### G.II-03 Container

Special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers. A more formal technical definition of a container is:

Article of transport equipment which is:

- a) Of a permanent character and accordingly strong enough to be suitable for repeated use
- b) Specially designed to facilitate the carriage of goods, by one or more mode of transport, without intermediate reloading;
- c) Fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another
- d) So designed as to be easy to fill and empty
- e) Stackable; and
- f) Having an internal volume of 1 m<sup>3</sup> or more.

Swap bodies are excluded.

Although without internal volume, and therefore not satisfying criterion (f) above, flats (see G.II-09 below) used in maritime transport should be considered to be a special type of container and therefore are included here.

### G.II-04 Sizes of containers

The main sizes of containers are:

- a) 20 Foot ISO container (length of 20 feet and width of 8 feet)
- b) 40 Foot ISO container (length of 40 feet and width of 8 feet)
- c) ISO container over 20 feet and under 40 feet of length
- d) ISO container over 40 foot long
- e) Super high cube container (oversize container)
- f) Air container (container conforming to standards laid down for air transportation).



Containers are normally 8 foot height but other heights also exist." High cube containers" are containers with a height of 9.5 foot." Super high cube containers" are containers exceeding the ISO dimensions. They include container lengths of 45 foot, 48 foot and 53 foot.

Containers sizes classified under a) to e) are referred to as large containers.

## G.II-05 Tare weight of container

The tare weight of a container is included in the total weight of the containerised goods transported, also called the gross-gross weight of goods. The gross weight of containerised goods transported can be calculated from the gross-gross weight by deducting the tare weight of the container and vice versa. If information about the tare weight is missing then the tare weight may be estimated using the averages below.

The tare weight of a container may be estimated as:

- |   |             |
|---|-------------|
| a) 20 Foot ISO container                                  | 2.3 tonnes  |
| b) 40 Foot ISO container                                  | 3.7 tonnes  |
| c) ISO container over 20 feet and under 40 feet of length | 3.0 tonnes  |
| d) ISO container over 40 feet of length                   | 4.7 tonnes. |

## G.II-06 Types of containers

The main types of containers, as defined by ISO Standards Handbook on Freight Containers are:

1. General purpose containers
2. Specific purpose containers
  - closed ventilated container
  - open top container
  - platform based container open sided
  - platform based container open sided with complete superstructure
  - platform based container open sided with incomplete superstructure and fixed ends
  - platform based container open sided with incomplete superstructure and folding ends
  - platform (container)
3. Specific cargo containers
  - thermal container
  - insulated container
  - refrigerated container - (expendable refrigerant)
  - mechanically refrigerated container
  - heated container
  - refrigerated and heated container
  - tank container
  - dry bulk container
  - named cargo container (such as automobile, livestock and others); and
  - air mode container.



**G.II-07 TEU (Twenty-foot Equivalent Unit)**

A statistical unit based on an ISO container of 20 foot length (6.10 m) to provide a standardised measure of containers of various capacities and for describing the capacity of container ships or terminals. One 20 Foot ISO container equals 1 TEU.

One 40 Foot ISO container equals 2 TEU.

One container with a length between 20 and 40 foot equals 1.50 TEU.

One container with a length of more than 40 foot equals 2.25 TEU.

**G.II-08 Swap body**

A freight-carrying unit optimised to road vehicle dimensions and fitted with handling devices for transfer between modes, usually road/rail.

*Such units were not originally designed to be stacked when full or top-lifted. Many units now can be, although not to the same extent as containers. The main feature distinguishing them from containers is that they are optimised to road vehicle dimensions. Such unit would need UIC approval to be used on rail. Some swap bodies are equipped with folding legs on which the unit stands when not on the vehicle.*

**G.II-09 Flat**

A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings.

*This is an alternative term used for certain types of specific purpose containers - namely platform containers and platform-based containers with incomplete structures.*

**G.II-10 Rail wagon for intermodal transport**

Wagons specially built or equipped for the transport of intermodal transport units (ITUs) or other goods road vehicles.

Types of wagons are:

- Pocket wagon: Rail wagon with a recessed pocket to accept the axle/wheel assembly of a semi-trailer
- Basket wagon: Rail wagon with a demountable sub frame, fitted with devices for vertical handling to allow the loading and unloading of semi-trailers or road motor vehicles
- Spine wagon: Rail wagon with a central chassis designed to carry a semi-trailer
- Low floor wagon: Rail wagon with a low loading platform built to carry, *inter alia* ITUs
- Rolling: Road wagon: Rail wagon with low floor throughout which, when coupled together, form a rolling-road.
- Double stack wagon: Rail wagon designed for the transport of containers stacked on top of each other
- Bimodal semi-trailer: A road semi-trailer that can be converted into a rail wagon by the addition of rail bogies.



**G.II-11 Ro-Ro unit**

Wheeled equipment for carrying goods, such as a lorry, trailer or semi-trailer, which can be driven or towed onto a vessel or train.

*Port or vessels' trailers are included in this definition.*

**G.II-12 Gantry crane**

An overhead crane comprising a horizontal gantry mounted on legs, which are either fixed, run in fixed tracks or on rubber tyres with relatively limited manoeuvre. The load can be moved horizontally, vertically and sideways.

*Such cranes normally straddle a road/rail and/or ship/shore interchange.*

**G.II-13 Straddle carrier**

A rubber-tyred overhead lifting vehicle for moving or stacking containers on a level reinforced surface.



**G.II-14 Reach stacker**

Tractor vehicle with front equipment for lifting, stacking or moving ITUs.

**G.II-15 Fork lift truck**

Vehicle equipped with power-driven horizontal forks, which allow it to lift, move or stack pallets, containers or swap bodies. The latter two are usually empty.

**G.II-16 Spreader**

Adjustable fitting on lifting equipment designed to connect with the upper corner fittings of an ITU.  
*Many spreaders have in addition grappier arms that engage the bottom side rails of an ITU.*

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